

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	311	(suarine or squarilium or squarylium) near15 (mixture or admixed or mixed or two or three or different)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/27 13:20
L2	410	(suarine or squarilium or squarylium) with (mixture or admixed or mixed or two or three or different)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/27 13:52
L3	412	(suarine or squarilium or squarylium) with (mixture or admixed or mixed or two or three or different or several or plural or plurality)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/27 13:20
L4	961	(suarine or squarilium or squarylium) near10 (ligand or chelate or chelating or chelation or metallized or metal or aluminum)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/27 13:51
L5	72	l3 and l4	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/27 13:50
L6	2	jp-06220438-\$.did.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/27 13:51
L7	67	(suarine or squarilium or squarylium) near10 (ligand or chelate or chelating or chelation or metallized or metal or aluminum)	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/27 13:51
L8	77	(suarine or squarilium or squarylium) with (assymetric\$4 or unsymmetric\$4 or mixture or admixed or mixed or two or three or different)	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/27 14:43
L9	67	l8 and @ad<"20040211"	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/27 14:04
L10	53	l7 and @ad<"20040211"	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/27 14:04
L11	46	l10 not l9	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/27 14:04

EAST Search History

L12	2491	(ligand\$1 or chelat\$6 or azo) with (different)	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/27 14:44
L13	736	l12 with (metal or metallized or aluminum)	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/27 14:44
L14	270591	((optical or laser or information) near5 (medium or media or disk or disc))	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/27 14:45
L15	11	l14 same l13	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/27 14:45

\$%^STN;HighlightOn= ***;HighlightOff=*** ;

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and display fields
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NEWS 14 JUL 14 FSTA enhanced with Japanese patents
NEWS 15 JUL 19 Coverage of Research Disclosure reinstated in DWPI

NEWS EXPRESS JUNE 30 CURRENT WINDOWS VERSION IS V8.01b, CURRENT
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 26 JUNE 2006.

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FILE 'HOME' ENTERED AT 14:57:22 ON 27 JUL 2006

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'CAPLUS' ENTERED AT 14:57:35 ON 27 JUL 2006

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FILE COVERS 1907 - 27 Jul 2006 VOL 145 ISS 5
FILE LAST UPDATED: 26 Jul 2006 (20060726/ED)

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=> s us 2004-0202098/pn
L1 1 US 2004-0202098/PN
(US2004202098/PN)

=> file reg		
COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	2.41	2.62

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STRUCTURE FILE UPDATES: 26 JUL 2006 HIGHEST RN 896142-63-5
DICTIONARY FILE UPDATES: 26 JUL 2006 HIGHEST RN 896142-63-5

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=> tra rn l1
L2 TRANSFER L1 1- RN : 7 TERMS
L3 7 L2

=> d scan

L3 7 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN
IN Nickel, bis[2,4-diphenoxy-6-[[phenylazo-.kappa.N2][2-
(trifluoromethyl)phenyl]methyl]azo-.kappa.N1]-1,3,5-triazinato]- (9CI)
MF C58 H38 F6 N14 Ni O4
CI CCS

/ Structure 1 in file .gra /

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 7 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN
IN Aluminum, bis[1-[(5-chloro-1,3-dihydro-1,3,3-trimethyl-2H-indol-2-
ylidene)methyl]-2-(hydroxy-.kappa.O)-4-hydroxy-3-[5-(hydroxy-.kappa.O)-1-
(4-methoxyphenyl)-3-propyl-1H-pyrazol-4-yl]cyclobutenediylumato][1-[(5-
chloro-1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-2-(hydroxy-

.kappa.O)-4-hydroxy-3-[5-(hydroxy-.kappa.O)-1-phenyl-3-(trifluoromethyl)-
1H-pyrazol-4-yl]cyclobutenediylumato]- (9CI)
MF C84 H72 Al Cl3 F3 N9 O11
CI CCS

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 7 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN
IN Aluminum, bis[1-[(1-butyl-5-chloro-1,3-dihydro-3,3-dimethyl-2H-indol-2-
ylidene)methyl]-3-[1-(1,1-dimethylethyl)-5-(hydroxy-.kappa.O)-3-propyl-1H-
pyrazol-4-yl]-2-(hydroxy-.kappa.O)-4-hydroxycyclobutenediylumato][1-[(5-
chloro-1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-2-(hydroxy-
.kappa.O)-4-hydroxy-3-[5-(hydroxy-.kappa.O)-3-methyl-1-phenyl-1H-pyrazol-4-
yl]cyclobutenediylumato]- (9CI)
MF C84 H91 Al Cl3 N9 O9
CI CCS

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

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/ Structure 2 in file .gra /

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 7 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN
IN Aluminum, bis[1-[(1-butyl-5-chloro-1,3-dihydro-3,3-dimethyl-2H-indol-2-
ylidene)methyl]-2-(hydroxy-.kappa.O)-4-hydroxy-3-[5-(hydroxy-.kappa.O)-1-
phenyl-3-(trifluoromethyl)-1H-pyrazol-4-yl]cyclobutenediylumato][1-[(5-
chloro-1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-2-(hydroxy-
.kappa.O)-4-hydroxy-3-[5-(hydroxy-.kappa.O)-1-phenyl-3-propyl-1H-pyrazol-4-
yl]cyclobutenediylumato]- (9CI)
MF C86 H73 Al Cl3 F6 N9 O9
CI CCS

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PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 7 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN
IN Aluminum, [1-[(1-butyl-5-chloro-1,3-dihydro-3,3-dimethyl-2H-indol-2-
ylidene)methyl]-3-[1-(1,1-dimethylethyl)-5-(hydroxy-.kappa.O)-3-propyl-1H-
pyrazol-4-yl]-2-(hydroxy-.kappa.O)-4-hydroxycyclobutenediylumato]bis[1-

[(5-chloro-1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-2-(hydroxy-.kappa.O)-4-hydroxy-3-[5-(hydroxy-.kappa.O)-3-methyl-1-phenyl-1H-pyrazol-4-yl]cyclobutenediylumato]- (9CI)
MF C81 H77 Al Cl3 N9 O9
CI CCS

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* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

/ Structure 3 in file .gra /

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 7 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN
IN Aluminum, [1-[(1-butyl-5-chloro-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene)methyl]-2-(hydroxy-.kappa.O)-4-hydroxy-3-[5-(hydroxy-.kappa.O)-1-phenyl-3-(trifluoromethyl)-1H-pyrazol-4-yl]cyclobutenediylumato]bis[1-[(5-chloro-1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-2-(hydroxy-.kappa.O)-4-hydroxy-3-[5-(hydroxy-.kappa.O)-1-phenyl-3-propyl-1H-pyrazol-4-yl]cyclobutenediylumato]- (9CI)
MF C85 H74 Al Cl3 F3 N9 O9
CI CCS

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PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 7 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN
IN Aluminum, [1-[(5-chloro-1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-2-(hydroxy-.kappa.O)-4-hydroxy-3-[5-(hydroxy-.kappa.O)-1-(4-methoxyphenyl)-3-propyl-1H-pyrazol-4-yl]cyclobutenediylumato]bis[1-[(5-chloro-1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)methyl]-2-(hydroxy-.kappa.O)-4-hydroxy-3-[5-(hydroxy-.kappa.O)-1-phenyl-3-(trifluoromethyl)-1H-pyrazol-4-yl]cyclobutenediylumato]- (9CI)
MF C81 H63 Al Cl3 F6 N9 O10
CI CCS

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

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ALL ANSWERS HAVE BEEN SCANNED

=> s cyclobutenediylumato and pyrazol
77 CYCLOBUTENEDIYLIUMATO

356210 PYRAZOL
L4 69 CYCLOBUTENEDIYLIUMATO AND PYRAZOL

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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	11.28	25.65

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=> s l4
L5 12 L4

=> d all 1-12

L5 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2006:343200 CAPLUS <<LOGINID::20060727>>
DN 144:401285
ED Entered STN: 14 Apr 2006
TI Filter for electronic display
IN Yamano, Junzo; Ukai, Katsumi
PA Kyowa Hakko Chemical Co., Ltd., Japan
SO PCT Int. Appl., 25 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 73

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006038685	A1	20060413	WO 2005-JP18607	20051007
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
PRAI JP 2004-295004	A	20041007		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2006038685	IPCI	C09B0057-00 [I,A]; C07D0231-22 [I,A]; C07D0231-00

[I,C*]; C09B0057-10 [I,A]; G02B0005-22 [I,A];
G09F0009-00 [I,A]
ECLA C09B057/00S

GI

/ Structure 4 in file .gra /

AB A filter for electronic displays which contains a squarylium compd./metal complex represented by the following general formula I (R1, R2 = H, alkyl, alkoxy, aralkyl, aryl, heterocyclyl; R3, R4 = H, alkyl, aralkyl, aryl, heterocyclyl; M = metal atom capable of coordinating; n = 1-4). 15
Squarylium compd./metal complexes are synthesized.

ST optical filter squarylium compd metal complex synthesis electronic display

IT Optical filters

Optical imaging devices

(squarylium compd./metal complex-contg. filter for electronic display)

IT ***882871-78-5P*** ***882871-79-6P*** ***882871-80-9P***

882871-82-1P ***882871-83-2P*** ***882871-84-3P***

882871-85-4P ***882871-86-5P*** ***882871-87-6P***

882871-88-7P ***882871-89-8P*** ***882871-90-1P***

882871-91-2P ***882871-92-3P*** ***882871-93-4P***

RL: DEV (Device component use); SPN (Synthetic preparation); TEM
(Technical or engineered material use); PREP (Preparation); USES (Uses)
(synthesis of squarylium compd./metal complex for electronic display filter)

IT 856006-86-5P 882863-64-1P 882863-65-2P

RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation);
RACT (Reactant or reagent)

(synthesis of squarylium compd./metal complex for electronic display filter)

IT 78-81-9, Isobutylamine 110-89-4, Piperidine, reactions 110-91-8,
Morpholine, reactions 110-96-3, Diisobutylamine 142-71-2, Copper
acetate 6018-89-9, Nickel acetate tetrahydrate 6046-93-1 14024-63-6,
Zinc acetyl acetate 15306-17-9, Aluminum tris(ethylacetoacetate)
24544-04-5, 2,6-Diisopropylaniline

RL: RCT (Reactant); RACT (Reactant or reagent)

(synthesis of squarylium compd./metal complex for electronic display filter)

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Kyowa Hakko Kemikaru Kabushiki Kaisha; WO 2005059608 A1 2005 CAPLUS
- (2) Kyowa Hakko Kogyo Co Ltd; WO 0250190 A 2002 CAPLUS
- (3) Kyowa Hakko Kogyo Co Ltd; EP 1334998 A1 2002 CAPLUS
- (4) Kyowa Hakko Kogyo Co Ltd; US 2003187272 A1 2002 CAPLUS
- (5) Ricoh Co Ltd; EP 1132902 A1 2002 CAPLUS
- (6) Ricoh Co Ltd; JP 2001322356 A 2002 CAPLUS
- (7) Ricoh Co Ltd; US 200144001 A1 2002
- (8) Ricoh Co Ltd; JP 2002234259 A 2002 CAPLUS

L5 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2006:147955 CAPLUS <<LOGINID::20060727>>

DN 144:243475

ED Entered STN: 17 Feb 2006

TI Optical recording medium, it recording-readout method, and optical
recording apparatus

IN Yashiro, Toru

PA Ricoh Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 21 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2006048892	A2	20060216	JP 2004-326759	20041110
	WO 2006051922	A1	20060518	WO 2005-JP20764	20051107
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,				

GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ,
LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ,
NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG,
SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN,
YU, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM

PRAI JP 2004-193563 A 20040630
JP 2004-326759 A 20041110

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2006048892	IPCI	G11B0007-24 [I,A]; G11B0007-244 [I,A]; G11B0007-254 [I,A]; G11B0007-257 [I,A]; B41M0005-26 [I,A]
	FTERM	2H111/EA03; 2H111/EA12; 2H111/EA22; 2H111/EA32; 2H111/EA37; 2H111/FA02; 2H111/FA11; 2H111/FA12; 2H111/FA14; 2H111/FA37; 2H111/FB48; 2H111/GA03; 2H111/GA07; 5D029/JA04; 5D029/JB09; 5D029/JB13; 5D029/JB14; 5D029/JB21; 5D029/JB35; 5D029/JB47; 5D029/LA15; 5D029/LB07; 5D029/RA02; 5D029/WB17; 5D029/WC01
WO 2006051922	IPCI	G11B0007-24 [I,A]; G11B0007-244 [I,A]; G11B0007-257 [I,A]; G11B0007-254 [I,A]; B41M0005-26 [I,A]

AB The invention relates to a rewritable optical disk comprising a first optical recording layer and a second optical recording layer, wherein the second optical recording layer contains org. dyes including at least one squarylium metal chelate compd. and the org. dyes show a DTA peak width of .ltoreq.45.degree.. The protective layer of the optical disk contains ZnS.

ST optical recording medium double layer disk squarylium dye

IT Erasable optical disks

Optical memory devices

Optical recording

(optical recording medium with squarylium dye, it recording-readout method, and optical recording app.)

IT ***439591-99-8*** ***823809-64-9*** ***876407-70-4***

876407-71-5 ***876407-72-6*** ***876407-73-7***

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)

(optical recording medium with squarylium dye, it recording-readout method, and optical recording app.)

IT 1314-98-3, Zinc sulfide, processes

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)

(protective layer; optical recording medium with squarylium dye, it recording-readout method, and optical recording app.)

L5 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2006:31396 CAPLUS <<LOGINID::20060727>>

DN 144:138998

ED Entered STN: 13 Jan 2006

TI Optical recording medium, recording and reproducing method thereof, and optical recording apparatus

IN Yashiro, Tohru; Nakamura, Yuki; Mikami, Tatsuo; Shimizu, Ikuo; Kinugasa, Motoharu; Toyoda, Hiroshi

PA Ricoh Company, Ltd., Japan; Kyowa Hakko Chemical Co., Ltd.

SO PCT Int. Appl., 79 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM B41M005-26

ICS G11B007-24

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
------------	------	------	-----------------	------

PI	WO 2006004172	A1	20060112	WO 2005-JP12523	20050630
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W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,

CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KM, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG,
NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL,
SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA,
ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF,
CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM,
KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG,
KZ, MD, RU, TJ, TM

JP 2006044241 A2 20060216 JP 2005-188996 20050628
PRAI JP 2004-193576 A 20040630
JP 2005-188996 A 20050628

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2006004172	ICM	B41M005-26
	ICS	G11B007-24
	IPCI	B41M0005-26 [ICM,7]; G11B0007-24 [ICS,7]
JP 2006044241	IPCI	B41M0005-26 [I,A]; G11B0007-244 [I,A]; G11B0007-24 [I,A]; G11B0007-254 [I,A]; G11B0007-257 [I,A]
	FTERM	2H111/EA03; 2H111/EA12; 2H111/EA22; 2H111/EA25; 2H111/EA39; 2H111/FA02; 2H111/FA12; 2H111/FA14; 2H111/FA27; 2H111/FB48; 2H111/FB60; 5D029/JA04; 5D029/JB09; 5D029/JB13; 5D029/JB35; 5D029/JB47; 5D029/LA15; 5D029/LB07; 5D029/WB17
AB	An optical recording medium contains a 1st substrate, a 1st information layer, an intermediate layer, a 2nd information layer and a 2nd substrate in this order, where the 1st information layer contains a 1st recording layer disposed on the 1st substrate and the 2nd information layer contains a reflective layer, a 2nd recording layer contg. an org. dye and a protective layer which are disposed on the 2nd substrate in this order; and the 2nd recording layer contains an org. dye which is at least one selected from the group consisting of the specified squarylium metal chelate compds. The material has improved light-resistance and can be applied for DVD.	
ST	optical recording medium DVD squarylium metal chelate	
IT	Optical ROM disks	
	Optical recording materials	
	(optical recording medium, recording and reproducing method thereof, and optical recording app.)	
IT	***439591-83-0***	***439591-91-0***
	873447-89-3	***873447-90-6***
	873447-92-8	***873447-91-7***
	RL: NUU (Other use, unclassified); USES (Uses)	
	(optical recording medium, recording and reproducing method thereof, and optical recording app.)	

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

- (1) Hitachi Maxell Ltd; JP 2003170664 A 2003 CAPLUS
- (2) Pioneer Corporation; EP 1067535 A2 2001 CAPLUS
- (3) Pioneer Corporation; JP 200123237 A 2001
- (4) Pioneer Corporation; US 2005063295 A1 2001 CAPLUS
- (5) Ricoh Company Ltd; EP 1335357 A1 2003 CAPLUS
- (6) Ricoh Company Ltd; US 20030206514 A1 2003
- (7) Ricoh Company Ltd; JP 2003305958 A 2003 CAPLUS

L5 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2006:10492 CAPLUS <<LOGINID::20060727>>

DN 144:117874

ED Entered STN: 06 Jan 2006

TI Optical recording medium with formazan metal complex to improve light stability and optical recording-readout method with 630-700 nm light

IN Tomura, Tatsuya; Sato, Tsutomu; Ueno, Yasunobu; Noguchi, Shu

PA Ricoh Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 25 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1					
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2006001104	A2	20060105	JP 2004-178951	20040616
PRAI	JP 2004-178951		20040616		

CLASS					
	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES		
	JP 2006001104	IPCI	B41M0005-26 [I,A]; G11B0007-244 [I,A]; G11B0007-24 [I,A]		
		FTERM	2H111/EA03; 2H111/EA22; 2H111/FB41; 2H111/FB42; 2H111/FB43; 2H111/FB48; 5D029/JA04; 5D029/JB47; 5D029/JC05; 5D029/WB11; 5D029/WB14; 5D029/WB17		

GI

/ Structure 5 in file .gra /

AB The invention relates to an optical recording medium comprising a substrate, an optional undercoat layer, a recording layer, a reflection layer, a protective layer or an adhesive layer and a second substrate, wherein the recording layer contains at least one formazan metal complex represented by I (Z1, Z2 = atoms for forming 5- to 6-membered ring; Z1, z2 = alkyl, aryl, alkylcarbonyl, arylcarbonyl, alkenyl, heterocyclyl, alkoxy carbonyl; R1, R2 = F, fluoroalkyl, halo, alkyl, nitro, cyano; k1, k2 = substituent no.; X = -CH2-, -SO2-; n = 0, 1) with metal (selected from Fe, Co, Ni, Cu, Zn, and Pd). The recording layer may include a 550-630 nm light absorbing dye.

ST optical recording medium formazan metal complex light stabilizer

IT Erasable optical disks

Optical recording

Optical recording materials

(optical recording medium with formazan metal complex to improve light stability and optical recording-readout method with 630-700 nm light)

IT 312583-14-5 331980-41-7 ***846543-60-0*** 872713-89-8D, complex with Nickel 872713-90-1D, complex with chromium 872713-91-2D, complex with nickel 872713-92-3D, complex with copper 872713-93-4D, complex with Nickel 872713-94-5D, complex with nickel 872713-95-6D, complex with nickel 872713-96-7D, complex with nickel 872713-97-8D, complex with nickel 872713-98-9D, complex with cobalt 872713-99-0D, complex with zinc 872714-00-6D, complex with nickel 872714-01-7D, complex with nickel 872714-02-8D, complex with nickel 872714-03-9D, complex with nickel 872714-04-0D, complex with cobalt

RL: MOA (Modifier or additive use); USES (Uses)

(optical recording medium with formazan metal complex to improve light stability and optical recording-readout method with 630-700 nm light)

L5 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:1049209 CAPLUS <<LOGINID::20060727>>

DN 143:356722

ED Entered STN: 30 Sep 2005

TI Optical recording medium for DVD disks and production method

IN Noguchi, Takashi; Sato, Tsutomu; Tomura, Tatsuya; Ueno, Yasunobu; Shimizu, Ikuo; Kinugasa, Motoharu; Toyota, Hiroshi; Ukai, Katsumi

PA Ricoh Co., Ltd., Japan; Kyowa Hakko Kogyo Co., Ltd.; Kyowa Oil and Fat Co., Ltd.

SO Jpn. Kokai Tokkyo Koho, 18 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G11B007-24

ICS B41M005-26; G11B007-26

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 73

FAN.CNT 1					
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2005267668	A2	20050929	JP 2004-73773	20040316
PRAI	JP 2004-73773		20040316		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES			
JP 2005267668	ICM	G11B007-24			
	ICS	B41M005-26; G11B007-26			
	IPCI	G11B0007-24 [ICM,7]; B41M0005-26 [ICS,7]; G11B0007-26 [ICS,7]			
	IPCR	B41M0005-26 [I,A]; B41M0005-26 [I,C*]; G11B0007-24 [I,A]; G11B0007-24 [I,C*]; G11B0007-26 [I,A]; G11B0007-26 [I,C*]			
	FTERM	2H111/EA03; 2H111/EA22; 2H111/FA01; 2H111/FA12; 2H111/FA14; 2H111/FA23; 2H111/FB48; 5D029/HA06; 5D029/JA04; 5D029/JB21; 5D029/JB35; 5D029/JB47; 5D029/MA13; 5D029/MA15; 5D029/WB11; 5D029/WB17; 5D029/WC01; 5D121/AA01; 5D121/AA04; 5D121/AA05; 5D121/EE03; 5D121/EE22			
AB	The invention refers to an optical recording medium for recordable DVD systems wherein the recording medium comprises a recording layer and a reflective layer laminated in that order on a substrate, and the recording layer contains a squalirium metal chelate and/or squalirium compd., and the reflective layer contains Ag and has thickness 900 - 1700 .ANG. (90 - 170 nm). Preferably, the reflective layer should contain Cu at 0.1 - 1.5 %at.				
ST	optical disk recording squalirium silver DVD				
IT	Optical disks (DVD; optical recording medium for DVD disks and prodn. method)				
IT	Optical disks (write-once read-many; optical recording medium for DVD disks and prodn. method)				
IT	***439591-89-6*** 449762-58-7 465529-88-8 639847-27-1 865852-19-3 865852-20-6 ***865876-48-8*** ***865876-49-9*** RL: DEV (Device component use); USES (Uses) (optical recording medium for DVD disks and prodn. method)				
L5	ANSWER 6 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN				
AN	2005:546192 CAPLUS <<LOGINID::20060727>>				
DN	143:86769				
ED	Entered STN: 24 Jun 2005				
TI	Double sided record-once read-many optical disks				
IN	Minakami, Satoru				
PA	Ricoh Co., Ltd., Japan				
SO	Jpn. Kokai Tokkyo Koho, 11 pp. CODEN: JKXXAF				
DT	Patent				
LA	Japanese				
IC	ICM	G11B007-24			
	ICS	B41M005-26; G11B007-007			
CC	74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)				
FAN.CNT 1					
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2005166171	A2	20050623	JP 2003-404065	20031203
PRAI	JP 2003-404065		20031203		
CLASS					
PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES			
JP 2005166171	ICM	G11B007-24			
	ICS	B41M005-26; G11B007-007			
	IPCI	G11B0007-24 [ICM,7]; B41M0005-26 [ICS,7]; G11B0007-007 [ICS,7]			
	IPCR	B41M0005-26 [I,A]; B41M0005-26 [I,C*]; G11B0007-007 [I,A]; G11B0007-007 [I,C*]; G11B0007-24 [I,A]; G11B0007-24 [I,C*]			
	FTERM	2H111/EA03; 2H111/EA04; 2H111/EA12; 2H111/EA22; 2H111/EA23; 2H111/EA25; 2H111/EA31; 2H111/FA02; 2H111/FA12; 2H111/FA14; 2H111/FB05; 2H111/FB09; 2H111/FB12; 2H111/FB17; 2H111/FB21; 2H111/FB42; 5D029/JA01; 5D029/JA04; 5D029/JB10; 5D029/JB14; 5D029/JB18; 5D029/JB42; 5D029/LA11; 5D029/RA03; 5D029/RA04; 5D029/RA17; 5D029/RA46; 5D029/RA49; 5D029/WA02; 5D090/AA01; 5D090/BB03; 5D090/BB05; 5D090/BB12; 5D090/BB13; 5D090/CC12; 5D090/CC14;			

5D090/DD01; 5D090/FF02; 5D090/FF11; 5D090/GG03;
5D090/HH01; 5D090/KK09

AB . The title disk has a first substrate, which is with a guide groove and consists of: a first dye-contg. record-once read-many recording layer; a first reflective layer; and an org. protective layer, an org. adhesive intermediate layer, and a second substrate which consists of: a third protective layer; Sb-Te based phase-change third recording layer; a second protective layer; a second reflective layer; an org. dye-contg. second recording layer; and a first protective layer, wherein the first and second recording layer is recorded/read out by irradiating a laser beam from the first substrate and wherein third recording layer is recorded/read out by irradiating a laser beam from the second substrate. The optical disk is manufd. without using a 2P process.

ST double sided record optical disk

IT Optical disks

(write-once read-many, double sided; double sided record-once read-many optical disks)

IT 1314-98-3, Zinc sulfide (ZnS), uses 7440-22-4, Silver, uses 7631-86-9, Silica, uses 330671-06-2, Kayarad DVD 003 660844-71-3

RL: DEV (Device component use); USES (Uses)

(double sided record-once read-many optical disks)

IT ***439591-91-0***

RL: TEM (Technical or engineered material use); USES (Uses)

(double sided record-once read-many optical disks)

L5 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:323387 CAPLUS <<LOGINID::20060727>>

DN 142:400663

ED Entered STN: 15 Apr 2005

TI Optical recording medium and its manufacture

IN Yashiro, Toru; Nakamura, Yuki; Mikami, Tatsuo

PA Ricoh Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G11B007-24

ICS B41M005-26; G11B007-26

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2005100493	A2	20050414	JP 2003-329776	20030922
PRAI	JP 2003-329776		20030922		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2005100493	ICM	G11B007-24
	ICS	B41M005-26; G11B007-26
	IPCI	G11B0007-24 [ICM,7]; B41M0005-26 [ICS,7]; G11B0007-26 [ICS,7]
	IPCR	B41M0005-26 [I,A]; B41M0005-26 [I,C*]; G11B0007-24 [I,A]; G11B0007-24 [I,C*]; G11B0007-26 [I,A]; G11B0007-26 [I,C*]
	FTERM	2H111/EA03; 2H111/EA12; 2H111/EA31; 2H111/FA02; 2H111/FA12; 2H111/FA14; 2H111/FA24; 2H111/FA27; 2H111/FA42; 5D029/JA04; 5D029/JB02; 5D029/JB05; 5D029/JC03; 5D029/KB03; 5D029/LA13; 5D029/LA15; 5D029/MA13; 5D029/RA02; 5D029/WB17; 5D029/WC01; 5D121/AA01; 5D121/AA05; 5D121/EE21

AB Title recording medium comprises the first substrate plate having , on the surface, an org. dye-contg. first recording layer and the first reflection layer and the second substrate having, on its surface, the second reflection layer, the org. dye-contg. second recording layer, and an inorg. protective layer laminated together via an org. intermediate layer. The recording medium records the information coming in from the surface of the first substrate on the first and the second recording layers and read out. The optical absorption of the second recording layer is higher than that of the first recording layer at the recording wave length.

ST optical recording medium DVD

IT Optical disks

(optical recording medium having two recording layer)
IT Polycarbonates, uses
RL: DEV (Device component use); USES (Uses)
(optical recording medium having two recording layer)
IT ***439591-71-6*** ***439591-99-8*** 465529-92-4
RL: DEV (Device component use); USES (Uses)
(optical recording medium having two recording layer)
L5 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:182949 CAPLUS <<LOGINID::20060727>>
DN 142:269320
ED Entered STN: 04 Mar 2005
TI Pigment-based write once type DVD medium recording/reproducing method and device
IN Tomura, Tatsuya; Sato, Tsutomu; Ueno, Yasunobu; Noguchi, Soh
PA Ricoh Company, Ltd., Japan
SO PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
IC ICM G11B007-0045
ICS G11B007-007; G11B007-125; G11B007-24
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 2005020217	A1	20050303	WO 2004-JP11984	20040820	
	W:			AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW		
	RW:			BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG		
	JP 2005100579	A2	20050414	JP 2004-22112	20040129	
	JP 3732499	B2	20060105			
	EP 1667122	A1	20060607	EP 2004-771945	20040820	
	R:			DE, ES, FR, GB, IT, NL		
PRAI	JP 2003-301467	A	20030826			
	JP 2004-22112	A	20040129			
	WO 2004-JP11984	W	20040820			

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2005020217	ICM	G11B007-0045
	ICS	G11B007-007; G11B007-125; G11B007-24
	IPCI	G11B0007-0045 [ICM,7]; G11B0007-00 [ICM,7,C*]; G11B0007-007 [ICS,7]; G11B0007-125 [ICS,7]; G11B0007-24 [ICS,7]
	IPCR	G11B0007-007 [I,A]; G11B0007-007 [I,C*]; G11B0007-24 [I,A]; G11B0007-24 [I,C*]
	ECLA	G11B007/007T; G11B007/24
JP 2005100579	IPCI	G11B0007-0045 [I,A]; G11B0007-00 [I,C*]; G11B0007-125 [I,A]
	IPCR	G11B0007-007 [I,A]; G11B0007-007 [I,C*]; G11B0007-24 [I,A]; G11B0007-24 [I,C*]
	FTERM	5D029/JA04; 5D029/LA02; 5D029/MA13; 5D029/RA30; 5D029/WA02; 5D090/AA01; 5D090/BB03; 5D090/CC01; 5D090/CC14; 5D090/DD01; 5D090/EE02; 5D090/KK04; 5D789/AA23; 5D789/BA01; 5D789/BB02; 5D789/DA01; 5D789/EC09; 5D789/HA47
EP 1667122	IPCI	G11B0007-0045 [ICM,7]; G11B0007-00 [ICM,7,C*]; G11B0007-007 [ICS,7]; G11B0007-125 [ICS,7]; G11B0007-24 [ICS,7]
	ECLA	G11B007/007T; G11B007/24

AB It is possible to provide an optical recording/reproducing method and device capable of obtaining a preferable recording waveform when

performing a high linear velocity recording to a pigment-based write once type DVD medium. The pigment-based write once type DVD medium recording/reproducing method is performed as follows. The shortest mark is recorded with a higher output pulse than the other marks onto a recording layer mainly composed of org. pigment and formed on a substrate having a wobbled guide groove. The third shortest mark and after are recorded by a single pulse light having a pulse power equal to that of the second shortest mark which has been outputted highly when the pulse rear end has been outputted highly for a predetd. period of time. When performing mark recording, a cooling pulse is irradiated to the rear end and after of the pulse of all the marks and the irradsn. light intensity is maintained at 0.1 mW or below for a predetd. period of time.

ST pigment based write once DVD optical disk memory device

IT Optical memory devices

(DVD players; pigment-based write once type DVD medium recording/reproducing method and device)

IT Optical disks

(write-once read-many; pigment-based write once type DVD medium recording/reproducing method and device)

IT 680209-37-4 ***846543-60-0***

RL: DEV (Device component use); USES (Uses)

(pigment-based write once type DVD medium recording/reproducing method and device)

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Anon; WO 0323769 A1

(2) Anon; EP 1425740 A CAPLUS

(3) Anon; US 200367857 A1

(4) Anon; CN 2574170 U

(5) Pioneer Electronic Corp; WO 0323769 A1 2003

(6) Pioneer Electronic Corp; EP 1425740 A 2003 CAPLUS

(7) Pioneer Electronic Corp; US 200367857 A1 2003

(8) Pioneer Electronic Corp; JP 200385753 A 2003

(9) Pioneer Electronic Corp; CN 2574170 U 2003

L5 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:33131 CAPLUS <<LOGINID::20060727>>

DN 142:123264

ED Entered STN: 14 Jan 2005

TI Optical recording DVD medium and its fabrication

IN Yashiro, Tohru; Mikami, Tatsuo; Nakamura, Yuki

PA Ricoh Company Ltd., Japan

SO Eur. Pat. Appl., 20 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM G11B007-24

ICS G11B007-26

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1496509	A2	20050112	EP 2004-16277	20040709
	EP 1496509	A3	20050316		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
	JP 2005044491	A2	20050217	JP 2004-73320	20040315
	US 2005013235	A1	20050120	US 2004-887787	20040709
	CN 1577554	A	20050209	CN 2004-10063579	20040712
PRAI	JP 2003-195402	A	20030710		
	JP 2004-73320	A	20040315		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 1496509	ICM	G11B007-24
	ICS	G11B007-26
	IPCI	G11B0007-24 [ICM,7]; G11B0007-26 [ICS,7]
	IPCR	G11B0007-24 [I,A]; G11B0007-24 [I,C*]; G11B0007-244 [I,A]; G11B0007-248 [I,A]; G11B0007-257 [I,A]; G11B0007-26 [N,A]; G11B0007-26 [N,C*]
	ECLA	G11B007/24S4; G11B007/244; G11B007/248; G11B007/257

JP 2005044491 IPCI G11B0007-24 [ICM,7]; G11B0007-26 [ICS,7]
 IPCR G11B0007-24 [I,A]; G11B0007-24 [I,C*]; G11B0007-244
 [I,A]; G11B0007-248 [I,A]; G11B0007-257 [I,A];
 G11B0007-26 [N,A]; G11B0007-26 [N,C*]
 FTERM 5D029/HA06; 5D029/JA04; 5D029/JB14; 5D029/JB35;
 5D029/LA15; 5D029/LB07; 5D029/MA13; 5D029/RA01;
 5D029/RA02; 5D029/RA04; 5D029/WB17; 5D029/WC01;
 5D121/AA01; 5D121/AA07; 5D121/EE22

US 2005013235 IPCI G11B0007-24 [ICM,7]
 IPCR G11B0007-24 [I,A]; G11B0007-24 [I,C*]; G11B0007-244
 [I,A]; G11B0007-248 [I,A]; G11B0007-257 [I,A];
 G11B0007-26 [N,A]; G11B0007-26 [N,C*]
 NCL 369/275.400
 ECLA G11B007/24S4; G11B007/244; G11B007/248; G11B007/257

CN 1577554 IPCI G11B0007-24 [ICM,7]; G11B0007-26 [ICS,7]
 IPCR G11B0007-24 [I,A]; G11B0007-24 [I,C*]; G11B0007-244
 [I,A]; G11B0007-248 [I,A]; G11B0007-257 [I,A];
 G11B0007-26 [N,A]; G11B0007-26 [N,C*]

AB The present invention provides an optical recording DVD disk having two recording layers in which information can be recorded and reproduced from one side. An optical recording medium includes a first information substrate selected from one including a first substrate and a read-only first recording layer contg. a reflective film and having information pits, and one including a first substrate with guide grooves, a first recording layer contg. an org. dye, and a first reflective layer arranged in this order; and a second information substrate including a second substrate with guide grooves, a second reflective layer, a second recording layer contg. an org. dye, and an inorg. protective layer in this order. The first and second information substrates are bonded with the interposition of an optically transparent org. interlayer so that the first and second substrates each face outward, and information recorded on the first and second recording layers is reproduced by applying light from a surface of the first substrate.

ST optical recording DVDROM disk
 IT Optical disks
 (optical DVD recording medium)
 IT 7440-22-4, Silver, uses 12659-64-2, Copper 0.5, silver 99.5 (atomic)
 178255-68-0, Silicon zinc oxide sulfide (Si0.1Zn0.4O0.2S0.4) 449762-58-7
 465529-92-4 478628-89-6 823809-63-8 ***823809-64-9***
 823809-65-0
 RL: TEM (Technical or engineered material use); USES (Uses)
 (optical DVD recording medium)

L5 ANSWER 10 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2004:700301 CAPLUS <<LOGINID::20060727>>
 DN 141:215735
 ED Entered STN: 27 Aug 2004
 TI Squarylium-metal chelate compounds and optical recording media
 IN Yashiro, Tohru; Ishimi, Tomomi; Mikami, Tatsuo; Shimizu, Ikuo; Kinugasa, Motoharu; Toyoda, Hiroshi
 PA Ricoh Company Ltd., Japan; Kyowa Hakko Kogyo Co., Ltd.; Kyowa Yuka Co., Ltd.
 SO Eur. Pat. Appl., 33 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 IC ICM C09B057-00
 ICS G11B007-24; B41M005-00
 CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 1449890	A1	20040825	EP 2004-3167	20040212
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2004244342	A2	20040902	JP 2003-34358	20030212
US 2004202098	A1	20041014	US 2004-776973	20040211
PRAI JP 2003-34358	A	20030212		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES

EP 1449890 ICM C09B057-00
ICS G11B007-24; B41M005-00
IPCI C09B0057-00 [ICM,7]; G11B0007-24 [ICS,7]; B41M0005-00 [ICS,7]
IPCR C09B0057-00 [I,A]; C09B0057-00 [I,C*]; G11B0007-24 [I,C*]; G11B0007-249 [I,A]
ECLA C09B057/00S; G11B007/249
JP 2004244342 IPCI C07D0403-08 [ICM,7]; C07D0403-00 [ICM,7,C*]; B41M0005-26 [ICS,7]; C09B0023-00 [ICS,7]; C09B0057-10 [ICS,7]; C09B0057-00 [ICS,7,C*]; G11B0007-24 [ICS,7]
IPCR C09B0057-00 [I,A]; C09B0057-00 [I,C*]; G11B0007-24 [I,C*]; G11B0007-249 [I,A]
FTERM 2H111/EA03; 2H111/EA22; 2H111/EA31; 2H111/EA40; 2H111/FA12; 2H111/FA23; 2H111/FB41; 2H111/FB42; 2H111/FB48; 4C063/AA01; 4C063/BB05; 4C063/CC22; 4C063/DD06; 4C063/EE10; 4H056/CA01; 4H056/CC02; 4H056/CC08; 4H056/CE01; 4H056/CE03; 4H056/CE06; 4H056/DD03; 4H056/FA06; 5D029/JA04
US 2004202098 IPCI G11B0007-26 [ICM,7]; G11B0005-84 [ICS,7]; G11B0003-70 [ICS,7]; G11B0003-00 [ICS,7,C*]
IPCR C09B0057-00 [I,A]; C09B0057-00 [I,C*]; G11B0007-24 [I,C*]; G11B0007-249 [I,A]
NCL 369/288.000
ECLA C09B057/00S; G11B007/249
OS MARPAT 141:215735
GI

/ Structure 6 in file .gra /

AB Squarylium-metal chelate compds. as recording materials for optical recording media, which have excellent recording properties, light resistance and storage stability. The squarylium-metal chelate compd. is represented by Formulas I (M = metal atom capable of coordinating; a, b and c each represents a squarylium dye ligand of formula II, where a is different from b; and c may be the same as or different from a or b; and m = 0, 1), II (R_{1,2} = alkyl group, aralkyl group, aryl group or heterocyclic group, each of which may be substituted; and X = aryl group, heterocyclic group which may be substituted).

ST squarylium metal chelate compd optical recording media disk
IT Optical disks
Optical recording materials
(squarylium-metal chelate compds. and optical recording media)
IT Chelates
RL: TEM (Technical or engineered material use); USES (Uses)
(squarylium-metal chelate compds. and optical recording media)
IT 465529-92-4
RL: TEM (Technical or engineered material use); USES (Uses)
(formazan metal chelate compd.; optical recording media contg. squarylium-metal chelate compds. and)
IT ***744251-73-8P*** ***744251-74-9P***
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(squarylium-metal chelate compds. for optical recording media)
IT ***744251-75-0P*** ***744251-76-1P*** ***744251-77-2P***
744251-78-3P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(squarylium-metal chelate compds. for optical recording media)

L5 ANSWER 11 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:818463 CAPLUS <<LOGINID::20060727>>
DN 139:324209
ED Entered STN: 17 Oct 2003
TI Photopolymerizable compositions containing metal complexes of squarylium compounds
IN Yamaoka, Tsuguo; Shimizu, Ikuo; Toyoda, Hiroshi; Kinugasa, Motoharu; Ikuta, Masanori; Katagi, Kyoko
PA Kyowa Yuka Co., Ltd., Japan
SO PCT Int. Appl., 31 pp.
CODEN: PIXXD2

DT Patent
 LA Japanese
 IC ICM C08F002-50
 ICS C09B023-04; C09B057-00; G03F007-029; C07D231-22; C07D403-08;
 C07D413-08; C07D417-08; C07D231-20; C07F003-00; C07F003-06;
 C07F005-06
 CC 37-6 (Plastics Manufacture and Processing)
 Section cross-reference(s): 38, 42, 74
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003085005	A1	20031016	WO 2003-JP4254	20030403
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2003236353	A1	20031020	AU 2003-236353	20030403
	EP 1493757	A1	20050105	EP 2003-745891	20030403
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	US 2005164120	A1	20050728	US 2003-508528	20030403
PRAI	JP 2002-104616	A	20020408		
	WO 2003-JP4254	W	20030403		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2003085005	ICM	C08F002-50
	ICS	C09B023-04; C09B057-00; G03F007-029; C07D231-22; C07D403-08; C07D413-08; C07D417-08; C07D231-20; C07F003-00; C07F003-06; C07F005-06
	IPCI	C08F0002-50 [ICM,7]; C08F0002-46 [ICM,7,C*]; C09B0023-04 [ICS,7]; C09B0023-00 [ICS,7,C*]; C09B0057-00 [ICS,7]; G03F0007-029 [ICS,7]; C07D0231-22 [ICS,7]; C07D0403-08 [ICS,7]; C07D0403-00 [ICS,7,C*]; C07D0413-08 [ICS,7]; C07D0413-00 [ICS,7,C*]; C07D0417-08 [ICS,7]; C07D0417-00 [ICS,7,C*]; C07D0231-20 [ICS,7]; C07D0231-00 [ICS,7,C*]; C07F0003-00 [ICS,7]; C07F0003-06 [ICS,7]; C07F0005-06 [ICS,7]; C07F0005-00 [ICS,7,C*]
	IPCR	C07D0261-00 [I,C*]; C07D0261-12 [I,A]; C07D0403-00 [I,C*]; C07D0403-08 [I,A]; C07D0413-00 [I,C*]; C07D0413-06 [I,A]; C07D0413-08 [I,A]; C07D0417-00 [I,C*]; C07D0417-08 [I,A]; C08F0002-46 [I,C*]; C08F0002-50 [I,A]; G03F0007-029 [I,A]; G03F0007-029 [I,C*]
	ECLA	C07D417/08; C07D231/22; C07D261/12; C07D403/08; C07D413/06+261+209C; C07D413/08; C08F002/50; G03F007/029
AU 2003236353	IPCI	C08F0002-50 [ICM,7]; C08F0002-46 [ICM,7,C*]; C07D0413-08 [ICS,7]; C07D0413-00 [ICS,7,C*]; C07D0417-08 [ICS,7]; C07D0417-00 [ICS,7,C*]; C07D0231-20 [ICS,7]; C07F0003-00 [ICS,7]; C07F0003-06 [ICS,7]; C07F0005-06 [ICS,7]; C07F0005-00 [ICS,7,C*]; C09B0023-04 [ICS,7]; C09B0023-00 [ICS,7,C*]; C09B0057-00 [ICS,7]; G03F0007-029 [ICS,7]; C07D0231-22 [ICS,7]; C07D0231-00 [ICS,7,C*]; C07D0403-08 [ICS,7]; C07D0403-00 [ICS,7,C*]
	IPCR	C07D0261-00 [I,C*]; C07D0261-12 [I,A]; C07D0403-00 [I,C*]; C07D0403-08 [I,A]; C07D0413-00 [I,C*]; C07D0413-06 [I,A]; C07D0413-08 [I,A]; C07D0417-00 [I,C*]; C07D0417-08 [I,A]; C08F0002-46 [I,C*]; C08F0002-50 [I,A]; G03F0007-029 [I,A]; G03F0007-029 [I,C*]
EP 1493757	IPCI	C08F0002-50 [ICM,7]; C08F0002-46 [ICM,7,C*]; C09B0023-04 [ICS,7]; C09B0023-00 [ICS,7,C*]; C09B0057-00 [ICS,7]; G03F0007-029 [ICS,7]; C07D0231-22

[ICS,7]; C07D0403-08 [ICS,7]; C07D0403-00 [ICS,7,C*];
 C07D0413-08 [ICS,7]; C07D0413-00 [ICS,7,C*];
 C07D0417-08 [ICS,7]; C07D0417-00 [ICS,7,C*];
 C07D0231-20 [ICS,7]; C07D0231-00 [ICS,7,C*];
 C07F0003-00 [ICS,7]; C07F0003-06 [ICS,7]; C07F0005-06
 [ICS,7]; C07F0005-00 [ICS,7,C*]
 IPCR C07D0261-00 [I,C*]; C07D0261-12 [I,A]; C07D0403-00
 [I,C*]; C07D0403-08 [I,A]; C07D0413-00 [I,C*];
 C07D0413-06 [I,A]; C07D0413-08 [I,A]; C07D0417-00
 [I,C*]; C07D0417-08 [I,A]; C08F0002-46 [I,C*];
 C08F0002-50 [I,A]; G03F0007-029 [I,A]; G03F0007-029
 [I,C*]
 ECLA C07D417/08; C07D231/22; C07D261/12; C07D403/08;
 C07D413/06+261+209C; C07D413/08; C08F002/50;
 G03F007/029
 US 2005164120 IPCI G03C0001-492 [ICM,7]; G03C0001-005 [ICM,7,C*]
 NCL 430/281.100
 OS MARPAT 139:324209
 AB The photopolymerizable compn. comprises a metal complex of a squarylium
 compd., a radical generating agent and a compd. contg. .gtoreq.1
 ethylenically unsatd. double bond. The photopolymerizable compn. exhibits
 enhanced light sensitivity, and is useful for presensitized plate,
 recording material for visible laser (such as dry film resist, digital
 proof and hologram), panchromatic sensitizing material (for example, a
 sensitizing material for a hologram and a sensitizing material for full
 color display comprising a photopolymerizable compn. included in a
 microcapsule), coating material, adhesive, etc.
 ST photopolymerizable compn squarylium compd metal complex
 IT Adhesives
 Coating materials
 Photoresists
 (photopolymerizable compns. contg. metal complexes of squarylium
 compds. for presensitized plates, visible laser recording materials,
 coatings and adhesives)
 IT Polymerization catalysts
 (photopolymn.; photopolymerizable compns. contg. metal complexes of
 squarylium compds. for presensitized plates, visible laser recording
 materials, coatings and adhesives)
 IT Lithographic plates
 (presensitized; photopolymerizable compns. contg. metal complexes of
 squarylium compds. for presensitized plates, visible laser recording
 materials, coatings and adhesives)
 IT 6542-67-2, 2,4,6-Tris(trichloromethyl)-s-triazine
 RL: CAT (Catalyst use); USES (Uses)
 (photopolymerizable compns. contg. metal complexes of squarylium
 compds. for presensitized plates, visible laser recording materials,
 coatings and adhesives)
 IT ***439591-71-6P*** ***439591-74-9P*** ***439591-76-1P***
 439591-99-8P 612830-89-4P 612830-90-7P 612830-91-8P
 612830-92-9P 612830-93-0P
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (photopolymerizable compns. contg. metal complexes of squarylium
 compds. for presensitized plates, visible laser recording materials,
 coatings and adhesives)
 IT 612830-94-1P
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM
 (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (photopolymerizable compns. contg. metal complexes of squarylium
 compds. for presensitized plates, visible laser recording materials,
 coatings and adhesives)
 IT 577974-81-3P 612837-77-1P 612837-78-2P
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
 (Reactant or reagent)
 (photopolymerizable compns. contg. metal complexes of squarylium
 compds. for presensitized plates, visible laser recording materials,
 coatings and adhesives)
 IT 89-25-8, 1-Phenyl-3-methylpyrazolin-5-one 91-66-7, N,N-Diethylaniline
 118-12-7, 1,3,3-Trimethyl-2-methylene indoline 557-34-6, Zinc acetate
 2892-63-9, 3,4-Dichloro-3-cyclobuten-1,2-dione 3119-93-5 5222-73-1,
 3,4-Dimethoxy-3-cyclobutene-1,2-dione 6872-17-9, 5-Chloro-1,3,3-
 trimethyl-2-methylene indoline 7727-43-7, Barium sulfate 15306-17-9,
 Aluminumtris(ethylacetoacetate) 23253-51-2, 5-Hydroxy-3-phenylisoxazole

29211-43-6 31272-05-6 35976-46-6, 5-Methoxy-1,3,3-trimethyl-2-methyleneindoline 612830-88-3

RL: RCT (Reactant); RACT (Reactant or reagent)

(photopolymerizable compns. contg. metal complexes of squarylium compds. for presensitized plates, visible laser recording materials, coatings and adhesives)

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

- (1) Kyowa Hakko Kogyo Co Ltd; JP 08-510752 A 1996
- (2) Kyowa Hakko Kogyo Co Ltd; US 5681685 A 1996 CAPLUS
- (3) Kyowa Hakko Kogyo Co Ltd; EP 729945 B 1996 CAPLUS
- (4) Kyowa Hakko Kogyo Co Ltd; WO 9609289 A 1996 CAPLUS
- (5) Kyowa Hakko Kogyo Co Ltd; WO 0250190 A 2002 CAPLUS
- (6) Kyowa Hakko Kogyo Co Ltd; AU 2002017451 A 2002 CAPLUS
- (7) Leila, T; Macrochemical Journal 2000, V64(3), P247
- (8) Mitsubishi Chemical Corp; JP 2000159776 A 2000 CAPLUS
- (9) Ricoh Co Ltd; EP 1267338 A 2002 CAPLUS
- (10) Ricoh Co Ltd; JP 2002370451 A 2002 CAPLUS
- (11) Ricoh Co Ltd; JP 2002370452 A 2002 CAPLUS
- (12) Ricoh Co Ltd; JP 2002370453 A 2002 CAPLUS
- (13) Ricoh Co Ltd; JP 2002370454 A 2002 CAPLUS

L5 ANSWER 12 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2002:487670 CAPLUS <<LOGINID::20060727>>

DN 137:70548

ED Entered STN: 28 Jun 2002

TI Metal complex-type squarylium compounds and rewritable optical recording media made by using the same

IN Shimizu, Ikuo; Toyoda, Hiroshi; Kinugasa, Motoharu; Yamada, Shiho; Noguchi, Soh; Satoh, Tsutomu; Tomura, Tatsuya

PA Kyowa Hakko Kogyo Co., Ltd., Japan; Kyowa Yuka Co., Ltd.; Ricoh Company, Ltd.

SO PCT Int. Appl., 57 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

IC ICM C09B023-00

ICS B41M005-26; G11B007-24

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 41, 73

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002050190	A1	20020627	WO 2001-JP11116	20011219
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	CA 2400181	AA	20020627	CA 2001-2400181	20011219
	AU 2002017451	A5	20020701	AU 2002-17451	20011219
	EP 1334998	A1	20030813	EP 2001-271415	20011219
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
	TW 588090	B	20040521	TW 2001-90131711	20011220
	US 2003187272	A1	20031002	US 2002-203409	20021127
	US 6660867	B2	20031209		
PRAI	JP 2000-387192	A	20001220		
	WO 2001-JP11116	W	20011219		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2002050190	ICM	C09B023-00
	ICS	B41M005-26; G11B007-24
	IPCI	C09B0023-00 [ICM,7]; B41M0005-26 [ICS,7]; G11B0007-24 [ICS,7]
	IPCR	C09B0057-00 [I,A]; C09B0057-00 [I,C*]; C09B0057-10

[I,A]; G11B0007-007 [N,A]; G11B0007-007 [N,C*];
G11B0007-24 [I,C*]; G11B0007-249 [I,A]
CA 2400181 ECLA C09B057/00S; C09B057/10; G11B007/249
IPCI C09B0023-00 [ICM,7]; G11B0007-24 [ICS,7]; B41M0005-26
[ICS,7]
AU 2002017451 ECLA C09B057/00S; C09B057/10; G11B007/249
IPCI C09B0023-00 [ICM,7]; B41M0005-26 [ICS,7]; G11B0007-24
[ICS,7]
IPCR C09B0057-00 [I,A]; C09B0057-00 [I,C*]; C09B0057-10
[I,A]; G11B0007-007 [N,A]; G11B0007-007 [N,C*];
G11B0007-24 [I,C*]; G11B0007-249 [I,A]
EP 1334998 IPCI C09B0023-00 [ICM,7]; B41M0005-26 [ICS,7]; G11B0007-24
[ICS,7]
IPCR C09B0057-00 [I,A]; C09B0057-00 [I,C*]; C09B0057-10
[I,A]; G11B0007-007 [N,A]; G11B0007-007 [N,C*];
G11B0007-24 [I,C*]; G11B0007-249 [I,A]
TW 588090 ECLA C09B057/00S; C09B057/10; G11B007/249
IPCI C09B0023-00 [ICM,7]; B41M0005-26 [ICS,7]; G11B0007-24
[ICS,7]
US 2003187272 IPCI G11B0007-24 [ICM,7]; C07F0005-06 [ICS,7]; C07F0005-00
[ICS,7,C*]
IPCR C09B0057-00 [I,A]; C09B0057-00 [I,C*]; C09B0057-10
[I,A]; G11B0007-007 [N,A]; G11B0007-007 [N,C*];
G11B0007-24 [I,C*]; G11B0007-249 [I,A]
NCL 548/101.000
ECLA C09B057/00S; C09B057/10; G11B007/249
OS MARPAT 137:70548
GI

/ Structure 7 in file .gra /

AB The invention provides materials having spectral characteristics, light
resistance, soly. and thermal decompn. characteristics suitable for DVD-R
recording, more specifically, squarylium-metal complexes represented by I
(R1,2 = alkyl, aralkyl, aryl, or heterocyclic group; Q = metal atom having
ability to coordinate such as Al; q = 2 or A = aryl, heterocyclic group,
or Y=CH-; Y = aryl or heterocyclic group). The max. optical absorption of
the metal complex squarylium compd. dissolved in chloroform is 550-600 nm,
and the mol extinction coeff. at the max absorption wavelength, log
.epsilon., is .gtoreq.5. The information reproducing wavelength is
600-700 nm. The rewritable optical recording medium contains a metal
complex- or amine-based photostabilizer.
ST metal aluminum squarylium compd rewritable optical recording medium; amine
photostabilizer rewritable optical recording medium
IT Optical recording materials
(erasable; metal squarylium complex for rewritable optical recording
medium)
IT Onium compounds
RL: TEM (Technical or engineered material use); USES (Uses)
(squarylium; rewritable optical recording medium contg.)
IT 86-92-0 89-25-8 90-31-3 118-12-7, 1,3,3-Trimethyl-2-
methyleineindoline 321-07-3 2749-59-9 4845-49-2 5222-73-1
6872-17-9, 5-Chloro-1,3,3-trimethyl-2-methyleineindoline 13024-90-3
20124-80-5 29211-43-6 31272-04-5 31272-05-6 35976-46-6,
5-Methoxy-1,3,3-trimethyl-2-methyleineindoline 39578-87-5,
1,3,3,5-Tetramethyl-2-methyleineindoline 54683-96-4 60798-11-0
62783-93-1, 5-Bromo-1,3,3-trimethyl-2-methyleineindoline 64123-72-4
99567-90-5 118048-80-9 118048-83-2 118049-03-9 184707-90-2
439289-89-1 439289-90-4 439289-91-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(metal squarylium complex for rewritable optical recording medium)
IT ***439591-71-6P*** ***439591-72-7P*** ***439591-73-8P***
439591-74-9P ***439591-75-0P*** ***439591-76-1P***
439591-77-2P ***439591-78-3P*** ***439591-79-4P***
439591-80-7P ***439591-81-8P*** ***439591-82-9P***
439591-83-0P ***439591-84-1P*** ***439591-85-2P***
439591-86-3P ***439591-87-4P*** ***439591-88-5P***
439591-89-6P ***439591-90-9P*** ***439591-91-0P***
439591-92-1P ***439591-93-2P*** ***439591-94-3P***
439591-95-4P ***439591-96-5P*** ***439591-97-6P***

439591-98-7P ***439591-99-8P*** ***439592-00-4P***
439592-01-5P ***439592-02-6P*** ***439592-03-7P***
439592-04-8P ***439592-05-9P*** ***439592-06-0P***

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(metal squarylium complex for rewritable optical recording medium)

IT 23507-22-4 87314-12-3 227190-73-0 439610-73-8

RL: TEM (Technical or engineered material use); USES (Uses)

(photostabilizer; rewritable optical recording medium contg.)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Konica Corp; JP 2000345059 A 2000 CAPLUS

(2) Kyowa Hakko Kogyo Co Ltd; WO 0144233 A1 2001 CAPLUS

(3) Kyowa Hakko Kogyo Co Ltd; EP 1152001 A1 2001 CAPLUS

(4) Ricoh Co Ltd; JP 200123235 A 2001

=> d his

(FILE 'HOME' ENTERED AT 14:57:22 ON 27 JUL 2006)

FILE 'CAPLUS' ENTERED AT 14:57:35 ON 27 JUL 2006

L1 1 S US 2004-0202098/PN

FILE 'REGISTRY' ENTERED AT 14:57:53 ON 27 JUL 2006

FILE 'CAPLUS' ENTERED AT 14:57:58 ON 27 JUL 2006

L2 TRA L1 1- RN : 7 TERMS

FILE 'REGISTRY' ENTERED AT 14:57:59 ON 27 JUL 2006

L3 7 SEA L2

L4 69 S CYCLOBUTENEDIYLIUMATO AND PYRAZOL

FILE 'CAPLUS' ENTERED AT 15:00:38 ON 27 JUL 2006

L5 12 S L4

=> log y

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ENTRY	SESSION
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FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
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FULL ESTIMATED COST	0.21	0.21

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FILE LAST UPDATED: 26 Jul 2006 (20060726/ED)

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=> s (squarine or squaraine or squarilium or squarylium)

8 SQUARINE

1 SQUARINES

9 SQUARINE

(SQUARINE OR SQUARINES)

464 SQUARINE

165 SQUARAINES

477 SQUARINE

(SQUARINE OR SQUARAINES)

27 SQUARILIUM

1 SQUARILIUMS

27 SQUARILIUM

(SQUARILIUM OR SQUARILIUMS)

654 SQUARYLIUM

8 SQUARYLIUMS

654 SQUARYLIUM

(SQUARYLIUM OR SQUARYLIUMS)

L1 1127 (SQUARINE OR SQUARINE OR SQUARILIUM OR SQUARYLIUM)

=> s (ligand or chelat? or complex? or metal or metallized or aluminium or al)

302880 LIGAND

205535 LIGANDS

412270 LIGAND

(LIGAND OR LIGANDS)

132306 CHELAT?

1656239 COMPLEX?

1662748 METAL

840116 METALS

2017341 METAL

(METAL OR METALS)

3502 METALLIZED

11526 ALUMINIUM

35 ALUMINIUMS

11555 ALUMINIUM

(ALUMINIUM OR ALUMINIUMS)

975020 AL

4852 ALS

979581 AL

(AL OR ALS)

L2 4302206 (LIGAND OR CHELAT? OR COMPLEX? OR METAL OR METALLIZED OR ALUMINIUM OR AL)

=> s l1 and l2

L3 232 L1 AND L2

=> s (mixed or different or complex(3a)salt) and l3

779907 MIXED

6 MIXEDS

779911 MIXED

(MIXED OR MIXEDS)

2273157 DIFFERENT

73 DIFFERENTS

2273211 DIFFERENT

(DIFFERENT OR DIFFERENTS)

1272127 COMPLEX

719530 COMPLEXES

1564006 COMPLEX

(COMPLEX OR COMPLEXES)

770289 SALT
596683 SALTS
1146815 SALT

(SALT OR SALTS)

27620 COMPLEX(3A) SALT

L4 37 (MIXED OR DIFFERENT OR COMPLEX(3A) SALT) AND L3

=> d all 1-37

L4 ANSWER 1 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2006:215298 CAPLUS <<LOGINID::20060727>>

DN 144:295861

ED Entered STN: 09 Mar 2006

TI The ***squarylium*** compound, its ***metal*** ***complex*** ,
photoelectric conversion material using the ***metal***
complex , photoelectric converter, and the photoelectrochemical
cell

IN Shimizu, Ikuo; Ikuta, Masanori; Kato, Shigeaki; Oseto, Yutaka; Konno,
Akinori

PA Kyowa Oil and Fat Co., Ltd., Japan; Shizuoka University

SO Jpn. Kokai Tokkyo Koho, 21 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2006063221	A2	20060309	JP 2004-248702	20040827
PRAI	JP 2004-248702		20040827		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2006063221	IPC	C09B0023-00 [I,A]; C07D0403-08 [I,A]; C07D0403-00 [I,C*]; H01M0014-00 [I,A]; H01L0031-04 [I,A]
	FTERM	4C063/AA01; 4C063/BB05; 4C063/CC22; 4C063/DD06; 4C063/EE10; 4H056/CA01; 4H056/CC02; 4H056/CC08; 4H056/CE01; 4H056/CE03; 4H056/DD03; 4H056/FA05; 4H056/FA10; 5F051/AA14; 5F051/FA03; 5F051/GA03; 5F051/GA06; 5H032/AA06; 5H032/AS16; 5H032/EE04; 5H032/EE16; 5H032/EE17; 5H032/EE20; 5H032/HH01

OS MARPAT 144:295861

GI

/ Structure 1 in file .gra /

AB The ***squarylium*** compd. is represented by I [R1-2 = H,
(substituted) alkyl, (substituted) allyl, or (substituted) aralkyl group;
when X = C the R1, R2, and adjacent C may bond together to form an
alicyclic hydrocarbon ring or a heterocyclic ring; R3 = H, (substituted)
alkyl, (substituted) allyl, or (substituted) aralkyl group; R4 = halo,
-NO2, -CN, (substituted) alkyl, (substituted) allyl, or (substituted)
aralkyl, or (substituted) alkoxyl group; n = integer 0-3; when n = 2-3,
the 2 neighboring R4 and 2 adjacent C may bond together to form an arom.
ring which may have substituent; X = S, , or O; when X = S or O resulting
in the absence of R1 and R2; when X = N resulting in the absence of R2;
R5, R6 = H, -OH, halo, -NO2, -CN, substituted) amino, (substituted) alkyl,
(substituted) allyl, or (substituted) aralkyl, or (substituted) alkoxyl
group; Y = N or O; when Y = O resulting in the absence of R5; A = acidic
group; m = integer 1-4; and when n = 2-3, A's may be the same or
different from one another]. The photoelec. conversion material
contains a semiconductor and the above ***squarylium*** compd. The
photoelectrochem. cell uses a photoelec. converter contg. the above
photoelec. conversion material.

ST photoelectrochem cell photoelec converter ***squarylium*** compd

IT Photoelectric devices

(converters; photoelec. conversion materials contg. ***squarylium***
compds. for photoelec. converters in photoelectrochem. cells)

IT Photoelectrochemical cells

(photoelec. conversion materials contg. ***squarylium*** compds.
for photoelec. converters in photoelectrochem. cells)
IT 1335-23-5, Copper iodide 7553-56-2, Iodine, uses 10377-51-2, Lithium
iodide 13463-67-7, Titania, uses 18282-10-5D, Tin oxide (SnO2),
F-doped 118676-08-7, tert-Butylpyridine 218151-78-1,
1,2-Dimethyl-3-propylimidazolium iodide
RL: DEV (Device component use); USES (Uses)
(photoelec. conversion materials contg. ***squarylium*** compds.
for photoelec. converters in photoelectrochem. cells)
IT 878384-25-9 878384-26-0 878384-27-1 878384-28-2 878384-29-3
RL: MOA (Modifier or additive use); USES (Uses)
(photoelec. conversion materials contg. ***squarylium*** compds.
for photoelec. converters in photoelectrochem. cells)

L4 ANSWER 2 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:586773 CAPLUS <<LOGINID::20060727>>
DN 143:120052
ED Entered STN: 08 Jul 2005
TI Hair dye composition containing a fluorindine compound and a coloring
composition
IN Lagrange, Alain
PA L'oreal, Fr.
SO Fr. Demande, 48 pp.
CODEN: FRXXBL
DT Patent
LA French
IC ICM A61K007-13
CC 62-3 (Essential Oils and Cosmetics)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2864782	A1	20050708	FR 2004-50041	20040107
	EP 1552813	A1	20050713	EP 2005-290033	20050106
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU				
	JP 2005213497	A2	20050811	JP 2005-2556	20050107
	US 2005188475	A1	20050901	US 2005-30170	20050107
PRAI	FR 2004-50041	A	20040107		
	US 2004-549534P	P	20040304		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
FR 2864782	ICM	A61K007-13
	IPCI	A61K0007-13 [ICM,7]
	IPCR	A61K0008-30 [I,C*]; A61K0008-49 [I,A]; A61Q0005-10 [I,A]; A61Q0005-10 [I,C*]
EP 1552813	ECLA	A61K008/49F; A61Q005/10
	IPCI	A61K0007-13 [ICM,7]
	IPCR	A61K0008-30 [I,C*]; A61K0008-49 [I,A]; A61Q0005-10 [I,A]; A61Q0005-10 [I,C*]
JP 2005213497	ECLA	A61K008/49F; A61Q005/10
	IPCI	C09B0017-06 [ICM,7]; C09B0017-00 [ICM,7,C*]; A61K0007-00 [ICS,7]; A61K0007-13 [ICS,7]; C07D0487-04 [ICS,7]; C07D0487-00 [ICS,7,C*]; D06P0003-08 [ICS,7]; D06P0003-04 [ICS,7,C*]
	IPCR	A61K0008-30 [I,C*]; A61K0008-49 [I,A]; A61Q0005-10 [I,A]; A61Q0005-10 [I,C*]
	FTERM	4C050/AA01; 4C050/AA08; 4C050/BB08; 4C050/CC08; 4C050/EE04; 4C050/FF01; 4C050/GG01; 4C050/HH01; 4C083/AA112; 4C083/AB012; 4C083/AB352; 4C083/AC082; 4C083/AC102; 4C083/AC122; 4C083/AC152; 4C083/AC172; 4C083/AC242; 4C083/AC472; 4C083/AC491; 4C083/AC522; 4C083/AC532; 4C083/AC542; 4C083/AC642; 4C083/AC692; 4C083/AC841; 4C083/AC851; 4C083/AC861; 4C083/AD042; 4C083/AD212; 4C083/AD282; 4C083/BB04; 4C083/BB05; 4C083/BB06; 4C083/BB07; 4C083/BB32; 4C083/BB33; 4C083/BB34; 4C083/BB35; 4C083/EE26; 4H057/AA02; 4H057/BA01; 4H057/BA09; 4H057/CA07; 4H057/CB45; 4H057/CB46; 4H057/DA01; 4H057/DA21
US 2005188475	IPCI	A61K0007-13 [ICM,7]
	IPCR	A61K0008-30 [I,C*]; A61K0008-49 [I,A]; A61Q0005-10

[I,A]; A61Q0005-10 [I,C*]
NCL 008/405.000
ECLA A61K008/49F; A61Q005/10

OS MARPAT 143:120052
GI

/ Structure 2 in file .gra /

AB A hair dye compn. contains a direct dye I in which :R1, R2, R3, are identical or ***different*** and represent a linear or branched C1-2 radical or a arylalkyl or aryl radical; R4, R5, are identical or ***different*** and represent a hydrogen atom, a halogen, an alkyl, and an alkoxy; n, m = 0-4. A hair dye prepd. contained 7,14-bis-(2-hydroxyethyl)-5-methyl-7,14-dihydro-quinoxalino[2,3-b]phenazine-5-ium chloride (10-3 mol) benzyl alc. 4.0, polyethylene glycol (60 EO) 6.0, hydroxyethyl cellulose 0.7, 60% alkylpolyglucoside 4.5, phosphate buffer q.s. pH = 7, and water q.s. 100 g. The compn. gives a blue tone to the hair.

ST hair dye fluorindine compd coloring

IT Surfactants
(amphoteric; hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Surfactants
(anionic; hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Azines
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(bis-; hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Surfactants
(cationic; hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Unsaturated compounds
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(cyanines; hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Flavones
Hydrazones
Lactones
Polyenes
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(derivs.; hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Dyes
(direct; hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Hair preparations
(dyes; hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Azo dyes
Oxidizing agents
(hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Nitro compounds
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Azines
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Bromates
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Carotenes, biological studies
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Enzymes, biological studies
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Peroxysulfates
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Porphyrins

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Ketones, biological studies
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(hydroxy; hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Surfactants
(ionic; hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Functional groups
(methylidyne group; hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Surfactants
(nonionic; hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Salts, biological studies
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(of peroxyacids; hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Dyes
(oxazines; hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Group IIIA element compounds
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(perborates; hair dye compn. contg. fluorindine compd. and coloring compn.)

IT Dyes
(thiazines; hair dye compn. contg. fluorindine compd. and coloring compn.)

IT 11084-05-2D, Oxazine, derivs.
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(di-; hair dye compn. contg. fluorindine compd. and coloring compn.)

IT 51-17-2D, Benzimidazole, derivs. 62-53-3D, Aniline, carboxanilide derivs. 74-82-8D, Methane, triaryl derivs. 81-77-6D, Indanthrone, derivs. 81-83-4D, Naphthalimide, derivs. 82-05-3D, Benzanthrone, derivs. 83-08-9D, Quinophthalone, derivs. 84-65-1D, Anthraquinone, derivs. 90-44-8D, Anthrone, ptrimido-fused derivs. 91-22-5D, Quinoline, derivs. 91-64-5D, Coumarin, derivs. 92-32-0D, Pyronine, derivs. 92-82-0D, Phenazine, derivs. 92-83-1D, Xanthene, derivs. 92-84-2D, Phenothiazine, derivs. 95-16-9D, Benzothiazole, derivs. 95-70-5 101-81-5D, Diphenylmethane, derivs. 106-50-3, 1,4-Diaminobenzene, biological studies 106-51-4D, 2,5-Cyclohexadiene-1,4-dione, derivs. 109-97-7D, Pyrrole, diketo pyrrolo derivs. 122-39-4D, Diphenylamine, derivs. 123-30-8, p-Aminophenol 128-64-3D, Isoviolanthrone, derivs. 128-70-1D, Pyranthrone, derivs. 129-56-6D, Pyrazolanthrone, derivs. 130-00-7D, Naphtholactam, derivs. 130-15-4D, 1,4-Naphthalenedione, derivs. 198-55-0D, Perylene, derivs. 254-04-6D, Benzopyran, derivs. 260-94-6D, Acridine, derivs. 273-53-0D, Benzoxazole, derivs. 289-95-2D, Pyrimidine, anthra derivs. 475-71-8D, Flavanthrone, derivs. 480-91-1D, Isoindolinone, derivs. 482-89-3D, Indigo, derivs. 496-12-8D, Isoindoline, bis derivs. 496-12-8D, Isoindoline, derivs. 500-85-6D, Indophenol, derivs. 504-65-4D, Formazan, derivs. 514-73-8D, Dithiazine, derivs. 522-75-8D, Thioindigo, derivs. 537-65-5D, Indamine, derivs. 574-93-6D, Phthalocyanine, derivs. 578-95-0D, Acridone, derivs. 588-59-0D, Stilbene, derivs. 1047-16-1D, Quinacridone, derivs. 2053-29-4D, Azomethine, derivs. 2412-14-8D, Thiopyronine, derivs. 2835-95-2, 5-Amino-2-methylphenol 6245-87-0D, Indoaniline, derivs. 7722-84-1, Hydrogen peroxide, biological studies 11120-54-0D, Oxadiazole, derivs. 13408-62-3D, Ferricyanide, alkali ***metal*** salts 27988-97-2D, Tetrazole, quaternized derivs. 39455-90-8D, Pyrazolone, derivs. 43135-91-7D, Benzimidazolone, derivs. 55302-96-0, 5-N-(.beta.-Hydroxyethyl)amino-2-methylphenol 78675-98-6D, ***Squaraine***, derivs. 97705-96-9D, Naphthanilide, derivs. 111076-33-6D, Fluorindine, derivs. 112772-03-9D, Benzindole, derivs. 226225-88-3 857470-17-8
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(hair dye compn. contg. fluorindine compd. and coloring compn.)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Henkel Kgaa; WO 9920233 A 1999 CAPLUS
- (2) Srinivasa, R; US 6193912 B1 2001 CAPLUS
- (3) Straley, J; US 3390948 A 1968 CAPLUS

L4 ANSWER 3 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2004:905190 CAPLUS <<LOGINID::20060727>>
 DN 141:368452
 ED Entered STN: 29 Oct 2004
 TI Tandem solar photovoltaic cell stacks
 IN Gui, John Yupend; Steigerwald, Robert Louis; Castleberry, Donald Earl
 PA General Electric Company, USA
 SO U.S. Pat. Appl. Publ., 20 pp.
 CODEN: USXXCO

DT Patent
 LA English
 IC ICM H01L031-00
 INCL 136244000; 136249000; 136255000
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 Section cross-reference(s): 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004211458	A1	20041028	US 2003-424276	20030428
PRAI	US 2003-424276		20030428		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2004211458	ICM	H01L031-00
	INCL	136244000; 136249000; 136255000
	IPCI	H01L0031-00 [ICM,7]
	IPCR	H01L0031-00 [I,A]; H01L0031-00 [I,C*]
	NCL	136/244.000

AB A photovoltaic device comprises a plurality of PV cell modules arranged in tandem. Each of the plurality of the tandem PV cell modules comprises at least a PV cell that comprises a pair of electrodes, at least one of which is substantially transparent to the light received by the PV device; an electron donor material, which is a photoactivatable material; and an electron acceptor material. The electron donor material of each of the plurality of the tandem PV cell modules is capable of absorbing a ***different*** portion of the spectrum of light received by the PV device.

ST solar photovoltaic tandem cell stack; photoelectrochem tandem cell stack
 IT Vapor deposition process
 (chem.; tandem solar photovoltaic cell stacks)

IT Porphyrins
 Quinones
 RL: MOA (Modifier or additive use); USES (Uses)
 (dyes, photoactivatable; tandem solar photovoltaic cell stacks)

IT Azo dyes
 Cyanine dyes
 Dyes
 (photoactivatable; tandem solar photovoltaic cell stacks)

IT Vapor deposition process
 (plasma; tandem solar photovoltaic cell stacks)

IT Imines
 RL: MOA (Modifier or additive use); USES (Uses)
 (quinone, dyes, photoactivatable; tandem solar photovoltaic cell stacks)

IT Dyes
 (***squarylium*** , photoactivatable; tandem solar photovoltaic cell stacks)

IT Glass substrates
 Photoelectrochemical cells
 Sputtering
 Tandem solar cells
 (tandem solar photovoltaic cell stacks)

IT Polysilanes
 Transition ***metal*** oxides
 RL: DEV (Device component use); USES (Uses)
 (tandem solar photovoltaic cell stacks)

IT Ionomers
 RL: MOA (Modifier or additive use); USES (Uses)
 (tandem solar photovoltaic cell stacks)

IT Polymers, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (transparent, substrate; tandem solar photovoltaic cell stacks)

IT Dyes
(xanthene, photoactivatable; tandem solar photovoltaic cell stacks)

IT 198-55-0, Perylene 519-73-3, Triphenylmethane 574-93-6, Phthalocyanine 1047-16-1, Quinacridone 23627-89-6, Naphthalocyanine 68651-46-7, Indigo
RL: MOA (Modifier or additive use); USES (Uses)
(dyes, photoactivatable; tandem solar photovoltaic cell stacks)

IT 207347-46-4, N719 Dye
RL: MOA (Modifier or additive use); USES (Uses)
(photoactivatable; tandem solar photovoltaic cell stacks)

IT 631-40-3, Tetrapropylammonium iodide 1312-43-2, Indium oxide 1312-81-8, Lanthanum oxide 1313-99-1, Nickel oxide, uses 1314-11-0, Strontium oxide, uses 1314-13-2, Zinc oxide, uses 1314-23-4, Zirconium oxide, uses 1314-35-8, Tungsten oxide, uses 1314-36-9, Yttrium oxide, uses 1327-33-9, Antimony oxide 1332-29-2, Tin oxide 1332-37-2, Iron oxide, uses 7429-90-5, Aluminum, uses 7440-02-0, Nickel, uses 7440-06-4, Platinum, uses 7440-22-4, Silver, uses 7440-50-8, Copper, uses 7440-57-5, Gold, uses 7553-56-2, Iodine, uses 9033-83-4, Poly(phenylene) 11098-99-0, Molybdenum oxide 11099-11-9, Vanadium oxide 11118-57-3, Chromium oxide 12055-23-1, Hafnium oxide 12597-69-2, Steel, uses 12627-00-8, Niobium oxide 13463-67-7, Titanium oxide, uses 20461-54-5, Iodide, uses 20667-12-3, Silver oxide 25233-34-5, Polythiophene 32028-95-8, Polysilane 50926-11-9, Ito 59763-75-6, Tantalum oxide 66280-99-7, Poly(thienylene vinylene) 81220-16-8, Du Pont 7713 91201-85-3, PolyisoThianaphthene 96638-49-2, Polyphenylenevinylene 117944-65-7, Indium zinc oxide 118676-08-7, tert-Butylpyridine 150477-54-6, Indium tin zinc oxide
RL: DEV (Device component use); USES (Uses)
(tandem solar photovoltaic cell stacks)

IT 9078-96-0, Surlyn
RL: MOA (Modifier or additive use); USES (Uses)
(tandem solar photovoltaic cell stacks)

L4 ANSWER 4 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:700301 CAPLUS <<LOGINID::20060727>>
DN 141:215735
ED Entered STN: 27 Aug 2004
TI ***Squarylium*** - ***metal*** ***chelate*** compounds and optical recording media
IN Yashiro, Tohru; Ishimi, Tomomi; Mikami, Tatsuo; Shimizu, Ikuo; Kinugasa, Motoharu; Toyoda, Hiroshi
PA Ricoh Company Ltd., Japan; Kyowa Hakko Kogyo Co., Ltd.; Kyowa Yuka Co., Ltd.
SO Eur. Pat. Appl., 33 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM C09B057-00
ICS G11B007-24; B41M005-00
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1449890	A1	20040825	EP 2004-3167	20040212
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	JP 2004244342	A2	20040902	JP 2003-34358	20030212
	US 2004202098	A1	20041014	US 2004-776973	20040211
PRAI	JP 2003-34358	A	20030212		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 1449890	ICM	C09B057-00
	ICS	G11B007-24; B41M005-00
	IPCI	C09B0057-00 [ICM,7]; G11B0007-24 [ICS,7]; B41M0005-00 [ICS,7]
	IPCR	C09B0057-00 [I,A]; C09B0057-00 [I,C*]; G11B0007-24 [I,C*]; G11B0007-249 [I,A]
	ECLA	C09B057/00S; G11B007/249
JP 2004244342	IPCI	C07D0403-08 [ICM,7]; C07D0403-00 [ICM,7,C*]; B41M0005-26 [ICS,7]; C09B0023-00 [ICS,7]; C09B0057-10

[ICS,7]; C09B0057-00 [ICS,7,C*]; G11B0007-24 [ICS,7]
 IPCR C09B0057-00 [I,A]; C09B0057-00 [I,C*]; G11B0007-24
 [I,C*]; G11B0007-249 [I,A]
 FTERM 2H111/EA03; 2H111/EA22; 2H111/EA31; 2H111/EA40;
 2H111/FA12; 2H111/FA23; 2H111/FB41; 2H111/FB42;
 2H111/FB48; 4C063/AA01; 4C063/BB05; 4C063/CC22;
 4C063/DD06; 4C063/EE10; 4H056/CA01; 4H056/CC02;
 4H056/CC08; 4H056/CE01; 4H056/CE03; 4H056/CE06;
 4H056/DD03; 4H056/FA06; 5D029/JA04
 US 2004202098 IPCI G11B0007-26 [ICM,7]; G11B0005-84 [ICS,7]; G11B0003-70
 [ICS,7]; G11B0003-00 [ICS,7,C*]
 IPCR C09B0057-00 [I,A]; C09B0057-00 [I,C*]; G11B0007-24
 [I,C*]; G11B0007-249 [I,A]
 NCL 369/288.000
 ECLA C09B057/00S; G11B007/249
 OS MARPAT 141:215735
 GI

/ Structure 3 in file .gra /

AB ***Squarylium*** - ***metal*** ***chelate*** compds. as
 recording materials for optical recording media, which have excellent
 recording properties, light resistance and storage stability. The
 squarylium - ***metal*** ***chelate*** compd. is represented
 by Formulas I(M = ***metal*** atom capable of coordinating; a, b and c
 each represents a ***squarylium*** dye ***ligand*** of formula II,
 where a is ***different*** from b; and c may be the same as or
 different from a or b; and m = 0, 1), II (R_{1,2} = alkyl group,
 aralkyl group, aryl group or heterocyclic group, each of which may be
 substituted; and X = aryl group, heterocyclic group which may be
 substituted).
 ST ***squarylium*** ***metal*** ***chelate*** compd optical
 recording media disk
 IT Optical disks
 Optical recording materials
 (***squarylium*** - ***metal*** ***chelate*** compds. and
 optical recording media)
 IT ***Chelates***
 RL: TEM (Technical or engineered material use); USES (Uses)
 (***squarylium*** - ***metal*** ***chelate*** compds. and
 optical recording media)
 IT 465529-92-4
 RL: TEM (Technical or engineered material use); USES (Uses)
 (formazan ***metal*** ***chelate*** compd.; optical recording
 media contg. ***squarylium*** - ***metal*** ***chelate***
 compds. and)
 IT 744251-73-8P 744251-74-9P
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or
 engineered material use); PREP (Preparation); USES (Uses)
 (***squarylium*** - ***metal*** ***chelate*** compds. for
 optical recording media)
 IT 744251-75-0P 744251-76-1P 744251-77-2P 744251-78-3P
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material
 use); PREP (Preparation); USES (Uses)
 (***squarylium*** - ***metal*** ***chelate*** compds. for
 optical recording media)

L4 ANSWER 5 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2004:433927 CAPLUS <<LOGINID::20060727>>
 DN 140:426122
 ED Entered STN: 28 May 2004
 TI Photovoltaic devices fabricated by growth from porous template
 IN Sager, Brian; Roscheisen, Martin; Petritsch, Klaus; Pichler, Karl;
 Fidanza, Jacqueline; Yu, Dong
 PA Nanosolar, Inc., USA
 SO PCT Int. Appl., 50 pp.
 CODEN: PIXXD2
 DT Patent

LA English
IC ICM: H01L
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38, 76
FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004044948	A2	20040527	WO 2003-US19173	20030617
	WO 2004044948	A3	20041111		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	US 2004084080	A1	20040506	US 2002-290119	20021105
	US 2004250848	A1	20041216	US 2002-319406	20021211
	US 6852920	B2	20050208		
	WO 2004001926	A2	20031231	WO 2003-US19604	20030617
	WO 2004001926	A3	20040429		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	AU 2003253672	A1	20040106	AU 2003-253672	20030617
	AU 2003301934	A1	20040603	AU 2003-301934	20030617
PRAI	US 2002-390904P	P	20020622		
	US 2002-290119	A	20021105		
	US 2002-303665	A	20021122		
	US 2002-319406	A	20021211		
	US 2003-443546	A	20030522		
	WO 2003-US19173	W	20030617		
	WO 2003-US19604	W	20030617		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2004044948	ICM	H01L
	IPCI	H01L [ICM,7]
	IPCR	H01L [I,S]; H01L0031-00 [I,A]; H01L0031-00 [I,C*]; H01L0031-0256 [I,A]; H01L0031-0256 [I,C*]; H01L0031-042 [I,A]; H01L0031-042 [I,C*]; H01L0031-18 [I,A]; H01L0031-18 [I,C*]
US 2004084080	IPCI	H01L0031-00 [ICM,7]
	IPCR	G02B [I,S]; H01L0031-00 [I,A]; H01L0031-00 [I,C*]; H01L0031-0248 [I,C*]; H01L0031-0352 [I,A]; H01L0031-04 [I,A]; H01L0031-04 [I,C*]; H01L0031-042 [I,A]; H01L0031-042 [I,C*]; H01L0031-18 [I,A]; H01L0031-18 [I,C*]
	NCL	136/263.000
	ECLA	H01L051/20C4B
US 2004250848	IPCI	H01L0031-00 [ICM,7]
	IPCR	C08G0075-00 [I,C*]; C08G0075-12 [I,A]; C08L0065-00 [I,A]; C08L0065-00 [I,C*]; H01L0021-00 [I,A]; H01L0021-00 [I,C*]; H01L0031-00 [I,A]; H01L0031-00 [I,C*]; H01L0031-0248 [I,C*]; H01L0031-0256 [I,A]; H01L0031-0256 [I,C*]; H01L0031-0352 [I,A]; H01L0031-042 [I,A]; H01L0031-042 [I,C*]; H01L0031-06 [I,A]; H01L0031-06 [I,C*]; H01L0035-12 [I,C*]; H01L0035-24 [I,A]; H01L0051-00 [I,A]; H01L0051-00 [I,C*]; H01L0051-05 [I,C*]; H01L0051-30 [I,A]; H02J [I,S]
	NCL	136/252.000
WO 2004001926	IPCI	H01L0031-00 [ICM,7]; H01L0035-24 [ICS,7]; H01L0035-12

[ICS,7,C*]; H01L0051-00 [ICS,7]; H01L0031-06 [ICS,7];
H01L0021-00 [ICS,7]
IPCR C08G0075-00 [I,C*]; C08G0075-12 [I,A]; C08L0065-00
[I,A]; C08L0065-00 [I,C*]; H01L0021-00 [I,A];
H01L0021-00 [I,C*]; H01L0031-00 [I,A]; H01L0031-00
[I,C*]; H01L0031-0248 [I,C*]; H01L0031-0256 [I,A];
H01L0031-0256 [I,C*]; H01L0031-0352 [I,A]; H01L0031-042
[I,A]; H01L0031-042 [I,C*]; H01L0031-06 [I,A];
H01L0031-06 [I,C*]; H01L0035-12 [I,C*]; H01L0035-24
[I,A]; H01L0051-00 [I,A]; H01L0051-00 [I,C*];
H01L0051-05 [I,C*]; H01L0051-30 [I,A]; H02J [I,S]
AU 2003253672 IPCI H01L0031-00 [ICM,7]; H01L0031-06 [ICS,7]; H01L0051-00
[ICS,7]; H01L0035-24 [ICS,7]; H01L0035-12 [ICS,7,C*];
H01L0021-00 [ICS,7]
IPCR C08G0075-00 [I,C*]; C08G0075-12 [I,A]; C08L0065-00
[I,A]; C08L0065-00 [I,C*]; H01L0021-00 [I,A];
H01L0021-00 [I,C*]; H01L0031-00 [I,A]; H01L0031-00
[I,C*]; H01L0031-0248 [I,C*]; H01L0031-0256 [I,A];
H01L0031-0256 [I,C*]; H01L0031-0352 [I,A]; H01L0031-042
[I,A]; H01L0031-042 [I,C*]; H01L0031-06 [I,A];
H01L0031-06 [I,C*]; H01L0035-12 [I,C*]; H01L0035-24
[I,A]; H01L0051-00 [I,A]; H01L0051-00 [I,C*];
H01L0051-05 [I,C*]; H01L0051-30 [I,A]; H02J [I,S]
AU 2003301934 IPCI H01L0031-00 [ICM,7]
IPCR H01L [I,S]; H01L0031-00 [I,A]; H01L0031-00 [I,C*];
H01L0031-0256 [I,A]; H01L0031-0256 [I,C*]; H01L0031-042
[I,A]; H01L0031-042 [I,C*]; H01L0031-18 [I,A];
H01L0031-18 [I,C*]
AB Photovoltaic devices, such as solar cells, and methods for their manuf.
are disclosed. A device may be characterized by an architecture where two
more materials having ***different*** electron affinities are
regularly arrayed such that their presence alternates within distances of
between about 1 nm and about 100 nm. The materials are present in a
matrix based on a porous template with an array of template pores. The
porous template is formed by anodizing a layer of ***metal***. A
photovoltaic device may include such a porous template disposed between a
base electrode and a transparent conducting electrode. A first
charge-transfer material fills the template pores, A second
(complementary) charge-transfer material fills addnl. space not occupied
by the first charge-transfer material.
ST solar photovoltaic device fabrication growth porous template
IT Nanotubes
(carbon; photovoltaic devices fabricated by growth from porous
template)
IT Liquid crystals
(discotic; photovoltaic devices fabricated by growth from porous
template)
IT Fullerenes
RL: DEV (Device component use); USES (Uses)
(doped; photovoltaic devices fabricated by growth from porous template)
IT Transparent films
(elec. conductive, oxides; photovoltaic devices fabricated by growth
from porous template)
IT Electric conductors
(films, transparent, oxides; photovoltaic devices fabricated by growth
from porous template)
IT Anodization
Cyanine dyes
Dyes
Nanostructures
Pigments, nonbiological
Solar cells
(photovoltaic devices fabricated by growth from porous template)
IT Oligomers
Polymers, uses
Polysilanes
RL: DEV (Device component use); USES (Uses)
(photovoltaic devices fabricated by growth from porous template)
IT Fullerenes
RL: DEV (Device component use); USES (Uses)
(polymers; photovoltaic devices fabricated by growth from porous
template)

IT Templates
(porous; photovoltaic devices fabricated by growth from porous template)

IT 18282-10-5, Tin dioxide
RL: DEV (Device component use); USES (Uses)
(F-doped; photovoltaic devices fabricated by growth from porous template)

IT 7782-41-4, Fluorine, uses
RL: MOA (Modifier or additive use); USES (Uses)
(SnO2 doped with; photovoltaic devices fabricated by growth from porous template)

IT 99685-96-8, Fullerene-C60
RL: DEV (Device component use); USES (Uses)
(doped; photovoltaic devices fabricated by growth from porous template)

IT 1313-99-1, Nickel oxide, uses 7440-02-0, Nickel, uses 7440-57-5, Gold, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(layer; photovoltaic devices fabricated by growth from porous template)

IT 7440-44-0, Carbon, uses
RL: DEV (Device component use); USES (Uses)
(nanotubes; photovoltaic devices fabricated by growth from porous template)

IT 7429-90-5, Aluminum, processes 7440-32-6, Titanium, processes
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
(photovoltaic devices fabricated by growth from porous template)

IT 110-01-0, Tetrahydrothiophene 198-55-0, Perylene 574-93-6, Phthalocyanine 7440-18-8D, Ruthenium, dyes, ***complexes***
9033-83-4, Polyphenylene 23627-89-6, Naphthalocyanine 25233-34-5, Polythiophene 26009-24-5, Poly(p-phenylenevinylene) 66280-99-7, Poly(thienylenevinylene) 78675-98-6, ***Squaraine*** 91201-85-3, Poly(isothianaphthene) 95270-88-5, Polyfluorene 96638-49-2, Poly(phenylene vinylene) 104934-50-1, Poly(3-hexylthiophene) 110134-47-9, Poly(3-hexylthiophene-2,5-diyl) 110590-81-3, 2,9-Di(pent-3-yl)-anthra[2,1,9-def:6,5,10-d'e'f']diisoquinoline-1,3,8,10-tetrone 110590-84-6, 2,9-Bis(1-hexyl-hept-1-yl)anthra[2,1,9-def:6,5,10-d'e'f']diisoquinoline-1,3,8,10-tetrone 126213-51-2, Pedot 137191-58-3, Poly(3-octylthiophene-2,5-diyl) 138184-36-8
RL: DEV (Device component use); USES (Uses)
(photovoltaic devices fabricated by growth from porous template)

IT 1312-43-2, Indium oxide 1312-81-8, Lanthanum oxide 1314-11-0, Strontium oxide, uses 1314-13-2, Zinc oxide, uses 1314-23-4, Zirconium oxide, uses 1314-35-8, Tungsten oxide, uses 1332-29-2, Tin oxide 1344-28-1, Alumina, uses 7631-86-9, Silica, uses 11098-99-0, Molybdenum oxide 11099-11-9, Vanadium oxide 12049-50-2, Calcium titanium oxide 12627-00-8, Niobium oxide 13463-67-7, Titania, uses 50926-11-9, Ito
RL: TEM (Technical or engineered material use); USES (Uses)
(template; photovoltaic devices fabricated by growth from porous template)

L4 ANSWER 6 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:344227 CAPLUS <<LOGINID::20060727>>

DN 141:81260

ED Entered STN: 28 Apr 2004

TI A Controlled Supramolecular Approach toward Cation-Specific Chemosensors: Alkaline Earth ***Metal*** Ion-Driven Exciton Signaling in ***Squaraine*** Tethered Podands

AU Arunkumar, Easwaran; Chithra, Parayali; Ajayaghosh, Ayyappanpillai
CS Photosciences and Photonics Division, Regional Research Laboratory (CSIR), Trivandrum, 695019, India

SO Journal of the American Chemical Society (2004), 126(21), 6590-6598
CODEN: JACSAT; ISSN: 0002-7863

PB American Chemical Society

DT Journal

LA English

CC 79-3 (Inorganic Analytical Chemistry)

AB Three ***different*** ***squaraine*** tethered bichromophoric podands 3a-c with one, two, and three oxygen atoms in the podand chain and an analogous monochromophore 4a were synthesized and characterized. Among these, the bichromophores 3a-c showed high selectivity toward alk. earth ***metal*** cations, particularly to Mg2+ and Ca2+ ions, whereas they

were optically silent toward alkali ***metal*** ions. From the absorption and emission changes as well as from the Job plots, Mg²⁺ ions form 1:1 folded ***complexes*** with 3a and 3b whereas Ca²⁺ ions prefer to form 1:2 sandwich dimers. However, 3c invariably forms weak 1:1 ***complexes*** with Mg²⁺, Ca²⁺, and Sr²⁺ ions. The signal output in all of these cases was achieved by the formation of a sharp blue-shifted absorption and strong quenching of the emission of 3a-c. The signal transduction is achieved by the exciton interaction of the face-to-face stacked ***squaraine*** chromophores of the cation ***complex***, which is a novel approach of specific cation sensing. The obsd. cation-induced changes in the optical properties are analogous to those of the H aggregates of ***squaraine*** dyes. A monochromophore 4a despite its binding, as evident from 1H NMR studies, remained optically silent toward Mg²⁺ and Ca²⁺ ions. While the behavior of 4a toward Mg²⁺ ion is understood, its optical silence toward Ca²⁺ ion is rationalized to the preferential formation of a Head-Tail-Tail-Head arrangement in which exciton coupling is not possible. The present study is ***different*** from other known reports on chemosensors in the sense that cation-specific supramol. host-guest ***complexation*** was exploited for controlling chromophore interaction via cation-steered exciton coupling as the mode of signaling.

- ST controlled supramol cation chemosensor; alk earth ***metal*** ion
 IT exciton signaling ***squaraine*** tethered podand
 Absorption spectra
 Emission spectra
 Fluorescence quenching
 (controlled supramol. approach toward cation-specific chemosensors for alk. earth ***metal*** ion-driven exciton signaling in ***squaraine*** tethered podands)
- IT Podands
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (controlled supramol. approach toward cation-specific chemosensors for alk. earth ***metal*** ion-driven exciton signaling in ***squaraine*** tethered podands)
- IT Alkaline earth ***metals***
 RL: ANT (Analyte); ANST (Analytical study)
 (ions; controlled supramol. approach toward cation-specific chemosensors for alk. earth ***metal*** ion-driven exciton signaling in ***squaraine*** tethered podands)
- IT 7439-95-4, Magnesium, analysis 7440-24-6, Strontium, analysis 7440-39-3, Barium, analysis 7440-70-2, Calcium, analysis
 RL: ANT (Analyte); ANST (Analytical study)
 (controlled supramol. approach toward cation-specific chemosensors for alk. earth ***metal*** ion-driven exciton signaling in ***squaraine*** tethered podands)
- IT 710293-39-3P 710293-40-6P 710293-41-7P 710293-42-8P
 RL: ARG (Analytical reagent use); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
 (controlled supramol. approach toward cation-specific chemosensors for alk. earth ***metal*** ion-driven exciton signaling in ***squaraine*** tethered podands)
- IT 710293-47-3 710293-49-5
 RL: ARU (Analytical role, unclassified); ANST (Analytical study)
 (controlled supramol. approach toward cation-specific chemosensors for alk. earth ***metal*** ion-driven exciton signaling in ***squaraine*** tethered podands)
- IT 710293-43-9P 710293-45-1P
 RL: ARU (Analytical role, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)
 (controlled supramol. approach toward cation-specific chemosensors for alk. earth ***metal*** ion-driven exciton signaling in ***squaraine*** tethered podands)
- IT 93-90-3P, 2-(Methylphenylamino)ethanol 7025-94-7P 84877-52-1P 107885-39-2P, 3-N,N-(Dimethylamino)phenyl-4-hydroxy-cyclobut-3-ene-1,2-dione 126739-49-9P 155172-87-5P, 3-N,N-(Dibutylamino)phenyl-4-hydroxy-cyclobut-3-ene-1,2-dione 362479-27-4P
 RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (controlled supramol. approach toward cation-specific chemosensors for alk. earth ***metal*** ion-driven exciton signaling in ***squaraine*** tethered podands)
- IT 100-61-8, N-Methylaniline, reactions 121-69-7, N,N-Dimethylaniline,

reactions 613-29-6, N,N-Dibutylaniline 2892-51-5, Squaric acid

RL: RCT (Reactant); RACT (Reactant or reagent)

(controlled supramol. approach toward cation-specific chemosensors for

alk. earth ***metal*** ion-driven exciton signaling in

squaraine tethered podands)

IT 2892-63-9P, Squaryl dichloride 107885-40-5P, 3-Chloro-4-(4'-

dimethylaminophenyl)-3-cyclobutene-1,2-dione 155172-86-4P,

3-Chloro-4-(4'-dibutylaminophenyl)-3-cyclobutene-1,2-dione

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(Reactant or reagent)

(controlled supramol. approach toward cation-specific chemosensors for

alk. earth ***metal*** ion-driven exciton signaling in

squaraine tethered podands)

RE.CNT 116 THERE ARE 116 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L4 ANSWER 7 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2004:60466 CAPLUS <<LOGINID::20060727>>
 DN 140:136162
 ED Entered STN: 26 Jan 2004
 TI ***Squarylium*** compound and its ***metal*** ***complex***
 for organic electroluminescent device
 IN Kido, Junji; Shimizu, Ikuo; Ikuta, Masanori; Katagi, Kyoko
 PA Kyowa Yuka Co., Ltd., Japan
 SO PCT Int. Appl., 28 pp.

CODEN: PIXXD2
DT Patent
LA Japanese
IC ICM C07D207-335
ICS C07D277-54; C07D471-06; C09K011-06; H05B033-14
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 27
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004007447	A1	20040122	WO 2003-JP8854	20030711
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	AU 2003252596	A1	20040202	AU 2003-252596	20030711
PRAI	JP 2002-202277	A	20020711		
	WO 2003-JP8854	W	20030711		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2004007447	ICM	C07D207-335
	ICS	C07D277-54; C07D471-06; C09K011-06; H05B033-14
	IPCI	C07D0207-335 [ICM,7]; C07D0207-00 [ICM,7,C*]; C07D0277-54 [ICS,7]; C07D0277-00 [ICS,7,C*]; C07D0471-06 [ICS,7]; C07D0471-00 [ICS,7,C*]; C09K0011-06 [ICS,7]; H05B0033-14 [ICS,7]
	IPCR	C07D0207-00 [I,C*]; C07D0207-46 [I,A]; C09K0011-06 [I,A]; C09K0011-06 [I,C*]; H01L0051-05 [I,C*]; H01L0051-30 [I,A]; H01L0051-50 [N,A]; H01L0051-50 [N,C*]; H05B0033-14 [I,A]; H05B0033-14 [I,C*]
	ECLA	C07D207/46; C09K011/06; H01L051/30H; H01L051/30H8; H01L051/30M; H05B033/14
AU 2003252596	IPCI	C07D0207-335 [ICM,7]; C07D0207-00 [ICM,7,C*]; C07D0277-54 [ICS,7]; C07D0277-00 [ICS,7,C*]; C07D0471-06 [ICS,7]; C07D0471-00 [ICS,7,C*]; C09K0011-06 [ICS,7]; H05B0033-14 [ICS,7]
	IPCR	C07D0207-00 [I,C*]; C07D0207-46 [I,A]; C09K0011-06 [I,A]; C09K0011-06 [I,C*]; H01L0051-05 [I,C*]; H01L0051-30 [I,A]; H01L0051-50 [N,A]; H01L0051-50 [N,C*]; H05B0033-14 [I,A]; H05B0033-14 [I,C*]

OS MARPAT 140:136162
GI

/ Structure 4 in file .gra /

AB The invention relates to a ***squarylium*** compd. represented by I, wherein R1 and R2 are the same or ***different*** and each represents H, optionally substituted alkyl, etc.; R3, R4, R5, and R6 are the same or ***different*** and each represents H, optionally substituted alkyl, etc.; and R7, R8, R9, and R10 are the same or ***different*** and each represents H, hydroxy, halo, optionally substituted amino, etc. The ***squarylium*** compd. and its ***metal*** ***complex*** is suited for use in making an org. electroluminescent device.

ST ***squarylium*** compd ***metal*** ***complex*** red emitting org electroluminescent device

IT Electroluminescent devices
(***squarylium*** compd. and its ***metal*** ***complex*** for org. electroluminescent device)

IT 5970-45-6P, Zinc acetate dihydrate 648882-41-1P 648882-42-2P
RL: DEV (Device component use); SPN (Synthetic preparation); PREP

(Preparation); USES (Uses)
 (***squarylium*** compd. and its ***metal*** ***complex***
 for org. electroluminescent device)
 IT 517-22-6, 3-Ethyl-2,4-dimethylpyrrole 7787-56-6, Beryllium sulfate
 tetrahydrate 126434-67-1 175542-92-4
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (***squarylium*** compd. and its ***metal*** ***complex***
 for org. electroluminescent device)
 IT 648869-95-8P 648869-96-9P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (***squarylium*** compd. and its ***metal*** ***complex***
 for org. electroluminescent device)
 RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE
 (1) Keil, D; Dyes and Pigments 2001, V49(3), P161 CAPLUS
 (2) Toyo Ink Manufacturing Co Ltd; JP 06-220438 A 1994 CAPLUS
 L4 ANSWER 8 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2003:632743 CAPLUS <<LOGINID::20060727>>
 DN 139:171330
 ED Entered STN: 15 Aug 2003
 TI Optical recording medium, optical recording method and optical recording
 device
 IN Noguchi, Soh; Satoh, Tsutomu; Tomura, Tatsuya; Ueno, Yasunobu; Yashiro,
 Tohru; Ishimi, Tomomi; Shimizu, Ikuo; Kinugasa, Motoharu; Toyoda, Hiroshi;
 Yamada, Shiho
 PA Ricoh Company, Ltd., Japan; Kyowa Hakko Kogyo Co., Ltd.; Kyowa Yuka Co.,
 Ltd.
 SO Eur. Pat. Appl., 45 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 IC ICM G11B007-24
 CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1335357	A1	20030813	EP 2003-2913	20030210
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	JP 2003335060	A2	20031125	JP 2002-143691	20020517
	JP 3739722	B2	20060125		
	JP 2003305958	A2	20031028	JP 2002-148122	20020522
	JP 3739724	B2	20060125		
	US 2003206514	A1	20031106	US 2003-357813	20030204
	US 6794005	B2	20040921		
	CA 2418572	AA	20030812	CA 2003-2418572	20030210
	JP 2004042624	A2	20040212	JP 2003-139539	20030516
PRAI	JP 2002-34725	A	20020212		
	JP 2002-142718	A	20020517		
	JP 2002-143691	A	20020517		
	JP 2002-148122	A	20020522		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 1335357	ICM	G11B007-24
	IPCI	G11B0007-24 [ICM,7]
	IPCR	G11B0007-24 [I,C*]; G11B0007-244 [I,A]; G11B0007-249 [I,A]
	ECLA	G11B007/244; G11B007/249
JP 2003335060	IPCI	B41M0005-26 [I,A]; G11B0007-244 [I,A]; G11B0007-24 [I,A]; G11B0007-258 [I,A]; C09B0023-00 [N,A]; C09B0047-18 [N,A]; C09B0047-20 [N,A]; C09B0047-22 [N,A]; C09B0047-04 [N,C*]; C09B0050-06 [N,A]; C09B0050-10 [N,A]; C09B0050-00 [N,C*]; C09B0057-00 [N,A]
	IPCR	B41M0005-26 [I,A]; B41M0005-26 [I,C*]; C09B0023-00 [N,A]; C09B0023-00 [N,C*]; C09B0047-04 [N,C*]; C09B0047-18 [N,A]; C09B0047-20 [N,A]; C09B0047-22 [N,A]; C09B0050-00 [N,C*]; C09B0050-06 [N,A]; C09B0050-10 [N,A]; C09B0057-00 [N,A]; C09B0057-00

JP 2003305958 IPCI [N,C*]; G11B0007-24 [I,A]; G11B0007-24 [I,C*]
B41M0005-26 [I,A]; G11B0007-004 [I,A]; G11B0007-00
[I,C*]; G11B0007-244 [I,A]; G11B0007-24 [I,A];
G11B0007-258 [I,A]; C09B0023-00 [N,A]; C09B0050-00
[N,A]; C09B0050-06 [N,A]; C09B0057-00 [N,A]
IPCR B41M0005-26 [I,A]; B41M0005-26 [I,C*]; C09B0023-00
[N,A]; C09B0023-00 [N,C*]; C09B0050-00 [N,A];
C09B0050-00 [N,C*]; C09B0050-06 [N,A]; C09B0057-00
[N,A]; C09B0057-00 [N,C*]; G11B0007-00 [I,C*];
G11B0007-004 [I,A]; G11B0007-24 [I,A]; G11B0007-24
[I,C*]

US 2003206514 IPCI G11B0003-70 [ICM,7]; G11B0003-00 [ICM,7,C*];
B32B0003-02 [ICS,7]
IPCR G11B0007-24 [I,C*]; G11B0007-244 [I,A]; G11B0007-249
[I,A]
NCL 369/288.000
ECLA G11B007/244; G11B007/249

CA 2418572 IPCI G11B0007-24 [ICM,7]
IPCR G11B0007-24 [I,C*]; G11B0007-244 [I,A]; G11B0007-249
[I,A]

JP 2004042624 IPCI B41M0005-26 [ICM,7]; G11B0007-0045 [ICS,7]; G11B0007-00
[ICS,7,C*]; G11B0007-24 [ICS,7]
IPCR B41M0005-26 [I,A]; B41M0005-26 [I,C*]; G11B0007-00
[I,C*]; G11B0007-0045 [I,A]; G11B0007-24 [I,A];
G11B0007-24 [I,C*]
FTERM 2H111/EA03; 2H111/EA25; 2H111/EA43; 2H111/FA12;
2H111/FA23; 2H111/FB42; 2H111/FB48; 5D029/JA04;
5D029/JC05; 5D029/MA13; 5D029/WB11; 5D029/WD10;
5D090/AA01; 5D090/BB03; 5D090/BB05; 5D090/CC01;
5D090/CC14; 5D090/KK06

OS MARPAT 139:171330
AB An optical recording medium has a substrate, and a recording layer
provided on the substrate and contg.: (a) a formazan ***metal***
chelate including a formazan compd. and a ***metal***
component, (b) a ***squarylium*** ***metal*** ***chelate***
including a ***squarylium*** compd. and a ***metal*** component;
and (c) at least one addnl. dye selected from phthalocyanine compds. and
pentamethine cyanine compds. Alternatively, the recording layer contains
(a) a first formazan ***metal*** ***chelate*** including a first
formazan compd. and a first ***metal*** component and having the max.
absorption wavelength in the range of 500-650 nm, (b) a ***squarylium***
metal ***chelate*** including a ***squarylium*** compd.
and a ***metal*** component; and (c) a second formazan ***metal***
chelate including a second formazan compd. and a second
metal component and having the max. absorption wavelength
different from that of the first formazan ***metal***
chelate and in the range of 650-750 nm.

ST optical recording medium device formazan ***metal*** ***chelate***
IT Optical disks
Optical recording
(optical recording medium and device)

IT 573713-85-6D, ***chelate*** with Ni
RL: TEM (Technical or engineered material use); USES (Uses)
(formazan ***metal*** ***chelates*** ; deloptical recording
medium and device)

IT 389132-70-1D, ***chelate*** with Ni 463945-11-1D, ***chelate***
with Cu 473299-18-2D, ***chelate*** with Ni 478535-02-3D,
chelate with Ni 478535-04-5D, ***chelate*** with Co
478535-06-7D, ***chelate*** with Co 478535-07-8D, ***chelate***
with Cu 478535-09-0D, ***chelate*** with FeCl3 573713-74-3D,
chelate with VCl3 573713-77-6D, ***chelate*** with Ni
573713-79-8D, ***chelate*** with Co 573714-10-0D, ***chelate***
with Ni 573714-14-4D, ***chelate*** with Ni 573714-19-9D,
chelate with Ni 573714-25-7D, ***chelate*** with Ni
573714-31-5D, ***chelate*** with Cu 573714-38-2D, ***chelate***
with Co 573714-42-8D, ***chelate*** with Ni 573714-46-2D,
chelate with Ni
RL: TEM (Technical or engineered material use); USES (Uses)
(formazan ***metal*** ***chelates*** ; optical recording medium
and device)

IT 54389-98-9 56289-64-6 142315-00-2 143313-95-5 219581-10-9
573713-88-9 573713-94-7 573714-05-3 573714-08-6

RL: TEM (Technical or engineered material use); USES (Uses)
(pentamethine cyanine compd.; optical recording medium and device)
IT 546102-82-3 546102-85-6 546102-88-9 546102-90-3 577706-10-6
577706-11-7 577706-12-8 577706-13-9 577706-14-0
RL: TEM (Technical or engineered material use); USES (Uses)
(phthalocyanine compd.; optical recording medium and device)
IT 577706-09-3
RL: TEM (Technical or engineered material use); USES (Uses)
(phthalocyanine compd.; sto all george yoptical recording medium and
device)
IT 345233-02-5D, ***chelate*** with ***Al*** 345233-06-9D,
chelate with ***Al*** 478629-06-0D, ***chelate*** with
Al 577740-86-4D, ***chelate*** with ***Al***
577740-88-6D, ***chelate*** with ***Al*** 577740-90-0D,
chelate with ***Al*** 577740-92-2D, ***chelate*** with
Al 577740-94-4D, ***chelate*** with ***Al***
577740-96-6D, ***chelate*** with ***Al*** 577740-98-8D,
chelate with ***Al***
RL: TEM (Technical or engineered material use); USES (Uses)
(***squarylium*** ***metal*** ***chelate*** ; optical
recording medium and device)

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Chapman, D; US 5695843 A 1997
- (2) K K Hayashibara Seibutsu Kagaku Kekyujou; EP 1103547 A 2001 CAPLUS
- (3) Kodak; EP 0750020 A 1996 CAPLUS
- (4) Kodak; EP 0837459 A 1998 CAPLUS
- (5) Ricoh; EP 1267338 A 2002 CAPLUS
- (6) Santoh, T; US 5190849 A 1993
- (7) Tdk; EP 1041549 A 2000 CAPLUS

L4 ANSWER 9 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2002:963788 CAPLUS <<LOGINID::20060727>>

DN 138:47390

ED Entered STN: 20 Dec 2002

TI Optical recording medium for DVD-R system

IN Noguchi, Soh; Satoh, Tsutomu; Tomura, Tatsuya; Ueno, Yasunobu; Shimizu,
Ikuo; Kinugasa, Motoharu; Toyoda, Hiroshi; Yamada, Shiho

PA Ricoh Company, Ltd., Japan; Kyowa Hakko Kogyo Co., Ltd.; Kyowa Yuka Co.,
Ltd.

SO Eur. Pat. Appl., 78 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM G11B007-24

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1267338	A2	20021218	EP 2002-13100	20020613
	EP 1267338	A3	20030528		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2002370451	A2	20021224	JP 2001-180475	20010614
	JP 2002370452	A2	20021224	JP 2001-180538	20010614
	JP 2002370453	A2	20021224	JP 2001-180565	20010614
	JP 2002370454	A2	20021224	JP 2001-180606	20010614
	US 2003157291	A1	20030821	US 2002-166742	20020611
	US 6737143	B2	20040518		
PRAI	JP 2001-180475	A	20010614		
	JP 2001-180538	A	20010614		
	JP 2001-180565	A	20010614		
	JP 2001-180606	A	20010614		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 1267338	ICM	G11B007-24
	IPCI	G11B0007-24 [ICM,6]
	IPCR	G11B0007-24 [I,C*]; G11B0007-244 [I,A]; G11B0007-249 [I,A]
	ECLA	G11B007/244; G11B007/249

JP 2002370451 IPCI B41M0005-26 [ICM,7]; G11B0007-24 [ICS,7]
 IPCR B41M0005-26 [I,A]; B41M0005-26 [I,C*]; G11B0007-24 [I,A]; G11B0007-24 [I,C*]
 JP 2002370452 IPCI B41M0005-26 [ICM,7]; C09B0023-00 [ICS,7]; C09B0050-00 [ICS,7]; C09B0050-06 [ICS,7]; C09B0057-00 [ICS,7]; G11B0007-24 [ICS,7]
 IPCR B41M0005-26 [I,A]; B41M0005-26 [I,C*]; C09B0023-00 [I,A]; C09B0023-00 [I,C*]; C09B0050-00 [I,A]; C09B0050-00 [I,C*]; C09B0050-06 [I,A]; C09B0057-00 [I,A]; C09B0057-00 [I,C*]; G11B0007-24 [I,A]; G11B0007-24 [I,C*]
 JP 2002370453 IPCI B41M0005-26 [ICM,7]; C09B0023-00 [ICS,7]; C09B0045-00 [ICS,7]; C09B0057-00 [ICS,7]; G11B0007-0045 [ICS,7]; G11B0007-00 [ICS,7,C*]; G11B0007-24 [ICS,7]
 IPCR B41M0005-26 [I,A]; B41M0005-26 [I,C*]; C09B0023-00 [I,A]; C09B0023-00 [I,C*]; C09B0045-00 [I,A]; C09B0045-00 [I,C*]; C09B0057-00 [I,A]; C09B0057-00 [I,C*]; G11B0007-00 [I,C*]; G11B0007-0045 [I,A]; G11B0007-24 [I,A]; G11B0007-24 [I,C*]
 JP 2002370454 IPCI B41M0005-26 [ICM,7]; C09B0023-00 [ICS,7]; C09B0045-00 [ICS,7]; C09B0045-14 [ICS,7]; C09B0045-20 [ICS,7]; C09B0045-22 [ICS,7]; C09B0057-00 [ICS,7]; C09B0069-02 [ICS,7]; C09B0069-00 [ICS,7,C*]; G11B0007-0045 [ICS,7]; G11B0007-00 [ICS,7,C*]; G11B0007-24 [ICS,7]
 IPCR B41M0005-26 [I,A]; B41M0005-26 [I,C*]; C09B0023-00 [I,A]; C09B0023-00 [I,C*]; C09B0045-00 [I,A]; C09B0045-00 [I,C*]; C09B0045-14 [I,A]; C09B0045-20 [I,A]; C09B0045-22 [I,A]; C09B0057-00 [I,A]; C09B0057-00 [I,C*]; C09B0069-00 [I,C*]; C09B0069-02 [I,A]; G11B0007-00 [I,C*]; G11B0007-0045 [I,A]; G11B0007-24 [I,A]; G11B0007-24 [I,C*]
 US 2003157291 IPCI B32B0003-02 [ICM,7]
 IPCR G11B0007-24 [I,C*]; G11B0007-244 [I,A]; G11B0007-249 [I,A]
 NCL 428/064.400
 ECLA G11B007/244; G11B007/249
 OS MARPAT 138:47390
 GI

/ Structure 5 in file .gra /

AB An optical recording medium has a substrate and at least a recording layer disposed on the substrate, the recording layer comprises at least one ***squarylium*** ***metal*** ***chelate*** compd. which comprises a ***squarylium*** compd. and a ***metal*** ; and at least one azo ***metal*** ***chelate*** compd. which comprises another ***metal*** and an azo compd. expressed by the following formula I (A and B each independently expresses a residue forming one of (a) a heterocyclic ring which may comprise a substituent and (b) arom. ring which may comprise a substituent, by combination with corresponding carbon atoms resp. bonded to A or B, X expresses an active-hydrogen-contg. substituent group, and as further disclosed in the claims). The object of the invention is to provide an optical recording medium for DVD-R system recordable at a wavelength of 600-720 nm, showing excellent light resistance and shelf life, in particular, when it contains a ***squarylium*** compd.
 ST optical recording medium disk DVDR ***squarylium*** compd
 IT Optical disks
 (optical recording medium for DVD-R system)
 IT 3566-94-7D, nickel ***complex*** 4866-93-7D, cobalt ***complex*** 4866-93-7D, cobalt ***complex*** , cyanine dye ***salt*** 7439-96-5D, Manganese, coordination ***complex*** with azo dye 7440-02-0D, Nickel, coordination ***complex*** with azo or formazan dye 7440-48-4D, Cobalt, coordination ***complex*** with azo or formazan dye 7440-50-8D, Copper, coordination ***complex*** with azo or formazan dye 14337-52-1D, manganese ***complex*** 50783-86-3D, cobalt ***complex*** , dimethylammonium ***salt*** 50783-86-3D, copper ***complex*** , cyanine dye ***salt*** 208340-09-4D, nickel ***complex*** 210556-42-6D, cobalt ***complex*** , trimethylammonium ***salt*** 210556-43-7D, cobalt ***complex*** ,

dimethylbutylammonium ***salt*** 219656-37-8D, zinc chloride
 complex 344933-91-1 344933-97-7 344934-01-6 345233-00-3
 345233-03-6 473299-16-0D, nickel ***complex*** 478534-92-8D,
 manganese ***complex*** 478534-93-9D, cobalt ***complex*** ,
 octyldimethylammonium ***salt*** 478534-94-0D, copper
 complex 478534-95-1D, nickel ***complex*** 478534-96-2D,
 cobalt ***complex*** 478534-97-3D, nickel ***complex***
 478534-98-4D, nickel ***complex*** 478534-99-5D, nickel
 complex 478535-00-1D, copper ***complex*** 478535-01-2D,
 copper ***complex*** 478535-02-3D, nickel ***complex***
 478535-03-4D, copper ***complex*** 478535-04-5D, cobalt
 complex 478535-05-6D, copper ***complex*** 478535-06-7D,
 cobalt ***complex*** 478535-07-8D, copper ***complex***
 478535-08-9D, nickel ***complex*** 478535-09-0D, iron chloride
 complex 478535-10-3D, cobalt ***complex*** 478535-11-4D,
 cobalt ***complex*** 478535-12-5D, nickel ***complex***
 478535-13-6D, nickel ***complex*** 478628-86-3 478628-87-4
 478628-88-5 478628-89-6 478628-89-6 478628-90-9 478628-91-0
 478628-92-1 478628-93-2 478628-94-3 478628-95-4 478628-96-5
 478628-97-6 478628-98-7 478629-00-4 478629-01-5 478629-02-6
 478629-03-7 478629-04-8 478629-05-9 478629-06-0 478629-07-1
 RL: TEM (Technical or engineered material use); USES (Uses)
 (optical recording medium for DVD-R system comprising mixts. of
 squarylium and azo ***metal*** ***chelate*** compds.)

L4 ANSWER 10 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2001:913302 CAPLUS <<LOGINID::20060727>>
 DN 136:233513
 ED Entered STN: 19 Dec 2001
 TI Investigation of the spectral properties of a ***squarylium***
 near-infrared dye and its ***complexation*** with Fe(III) and Co(II)
 ions
 AU Tarazi, Leila; Narayanan, Nara; Sowell, John; Patonay, Gabor; Strekowski,
 Lucjan
 CS Department of Chemistry, Georgia State University, Atlanta, GA, 30303, USA
 SO Spectrochimica Acta, Part A: Molecular and Biomolecular Spectroscopy
 (2002), 58A(2), 257-264
 CODEN: SAMCAS; ISSN: 1386-1425
 PB Elsevier Science B.V.
 DT Journal
 LA English
 CC 41-11 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic
 Sensitizers)
 Section cross-reference(s): 73, 79
 AB The spectral features of the ***squarylium*** dye NN525 in
 different solns. and its ***complexation*** with several
 metal ions were investigated. The absorbance max. of the dye is
 at 669 nm in THF. This value matches the output of a com. available laser
 diode (650 nm), thus making use of such a source practical for excitation.
 The emission max. of the dye in THF is at 676 nm. The addn. of either
 Fe(III) ion or Co(II) ion resulted in fluorescence quenching of the dye.
 The detection limit is 6.24.times.10-8 M for Fe(III) ion and
 1.55.times.10-8 M for Co(II) ion. The molar ratio of the ***metal***
 to the dye was established to be 1:1 for both ***metal*** ions. The
 stability const. KS of the ***metal*** -dye ***complex*** was
 calcd. to be 3.14 .times. 106 M-1 for the Fe-dye ***complex*** and
 2.64 .times. 105 M-1 for the Co-dye ***complex*** .
 ST ***squarylium*** near IR dye cobalt iron ***complexation*** THF
 IT Fluorescence quenching
 Fluorometry
 (cobalt and iron detn. by fluorescence quenching of ***squarylium***
 near-IR dye)
 IT ***Complexation***
 (in cobalt and iron detn. by fluorescence quenching of
 squarylium near-IR dye)
 IT Fluorescence
 (investigation of spectral properties of ***squarylium*** near-IR
 dye and its ***complexation*** with ***metal*** ions in THF)
 IT Formation constant
 (of cobalt and iron ***complexes*** with ***squarylium***
 near-IR dye)
 IT Solvent polarity effect

(on fluorescence and absorption spectra of ***squarylium*** near-IR dye)

IT 7440-48-4, Cobalt, properties
 RL: ANT (Analyte); PRP (Properties); ANST (Analytical study)
 (investigation of spectral properties of ***squarylium*** near-IR dye and its ***complexation*** with Co(II) ions in THF)

IT 256924-69-3, NN 525
 RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)
 (investigation of spectral properties of ***squarylium*** near-IR dye and its ***complexation*** with Co(II) ions in THF)

IT 7439-89-6, Iron, properties
 RL: ANT (Analyte); PRP (Properties); ANST (Analytical study)
 (investigation of spectral properties of ***squarylium*** near-IR dye and its ***complexation*** with Fe(III) ions in THF)

RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE

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L4 ANSWER 11 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2001:896347 CAPLUS <<LOGINID::20060727>>
 DN 136:225958
 ED Entered STN: 13 Dec 2001
 TI Optical detection of Cu²⁺ ion using a SQ-dye containing polymeric thin-film on Au surface
 AU Ock, Kyungsik; Jang, Gabsoo; Roh, Yongrae; Kim, Sunghoon; Kim, Jaeho; Koh, Kwangnak
 CS Department of Sensor Engineering, Kyungpook National University, Graduate

School, Taegu, 702-701, S. Korea
 SO Microchemical Journal (2001), 70(3), 301-305
 CODEN: MICJAN; ISSN: 0026-265X
 PB Elsevier Science B.V.
 DT Journal
 LA English
 CC 79-2 (Inorganic Analytical Chemistry)
 AB The authors have fabricated Cu²⁺ ion sensor using a ***squarylium*** dye (SQ-dye) contg. polymeric thin-film. Surface Plasmon Resonance (SPR) was used as a signal amplifier to achieve high sensitivity and large linear dynamic range for detection of Cu²⁺ ion. High selectivity to Cu²⁺ ion was obtained by the effective electrostatic interaction between SQ-dye and Cu²⁺ ion in the polymeric film. The optimal anal. condition of high selectivity and sensitivity in the wider linear dynamic range obtained in this study may be a result of the cooperative hard-soft ***metal*** ion- ***ligand*** interaction and effective detection of refractive index changes by the ***complexation*** of Cu²⁺ ion and SQ-dye in SPR measurement. Among 10 ***different*** alkali ***metal***, alk. earth ***metal***, and transition ***metal*** ions, SQ-dye in poly(vinylchloride)-poly(vinyl acetate)-poly(vinyl alc.) (PVC-PVAc-PVA) copolymer film showed the highest selectivity to Cu²⁺ ion. Although the interaction between SQ-dye and ***metal*** ions was not well understood, both cooperative hard-soft ***metal*** ion- ***ligand*** interaction and size-selective recognition of Cu²⁺ ion to SQ-dye may contribute to high selectivity. Also, addnl. sensitivity in the detection of Cu²⁺ ion by SPR was obtained by matching the wavelength of probing radiation of SPR and absorption max. of SQ-dye at 675 nm, which allow to detect small changes in the refractive index by ***complex*** formation on the sensing surface. This result may apply in development of the Cu²⁺ ion selective sensor for medical, biochem., and environmental applications.

ST copper ion optical detection ***squarylium*** dye polymer film gold
 IT Optical sensors
 (optical detection of Cu²⁺ ion using ***squarylium*** -dye contg. polymeric thin-film on Au surface)
 IT Surface plasmon
 (resonance; optical detection of Cu²⁺ ion using ***squarylium*** -dye contg. polymeric thin-film on Au surface)
 IT Dyes
 (***squarylium***; optical detection of Cu²⁺ ion using ***squarylium*** -dye contg. polymeric thin-film on Au surface)
 IT 7440-50-8, Copper, analysis
 RL: ANT (Analyte); ANST (Analytical study)
 (optical detection of Cu²⁺ ion using ***squarylium*** -dye contg. polymeric thin-film on Au surface)
 IT 12243-46-8P
 RL: ARG (Analytical reagent use); DEV (Device component use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
 (optical detection of Cu²⁺ ion using ***squarylium*** -dye contg. polymeric thin-film on Au surface)
 IT 7440-57-5, Gold, analysis 25086-48-0, Vinyl acetate-vinyl alcohol-vinyl chloride copolymer
 RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
 (optical detection of Cu²⁺ ion using ***squarylium*** -dye contg. polymeric thin-film on Au surface)
 IT 1640-39-7, 2,3,3-Trimethylindolenine 2892-51-5, Squaric acid
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (optical detection of Cu²⁺ ion using ***squarylium*** -dye contg. polymeric thin-film on Au surface)
 IT 5418-63-3P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (optical detection of Cu²⁺ ion using ***squarylium*** -dye contg. polymeric thin-film on Au surface)

RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L4 ANSWER 12 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2001:636906 CAPLUS <<LOGINID::20060727>>

ED Entered STN: 02 Sep 2001

TI Optical detection of Cu²⁺ ion using a SQ-dye containing polymeric thin-film

AU Kim, Tae-il; Kim, Jae-Ho; Kim, Sung-Hoon; Koh, Kwangnak

CS Department of Molecular Science and Technology, Ajou University, Suwon, 442-749, S. Korea

SO Abstracts of Papers, 222nd ACS National Meeting, Chicago, IL, United States, August 26-30, 2001 (2001), ANYL-108 Publisher: American Chemical Society, Washington, D. C.

CODEN: 69BUZP

DT Conference; Meeting Abstract

LA English

AB In this study, we have fabricated Cu²⁺ ion sensor using a ***squarylium*** dye (SQ-dye) contg. polymeric thin-film. Surface plasmon resonance (SPR) was used as a signal amplifier to achieve high sensitivity and large linear dynamic range for detection of Cu²⁺ ion. High selectivity to Cu²⁺ ion was obtained by the effective electrostatic interaction between SQ-dye and Cu²⁺ ion in the polymeric film. The optimal anal. condition of high selectivity and sensitivity in the wider linear dynamic range obtained in this study may be result of the cooperative "hard-soft" ***metal*** ion- ***ligand*** interaction and effective detection of refractive index changes by the ***complexation*** of Cu²⁺ ion and SQ-dye in SPR measurement. Among 10 ***different*** alkali ***metal***, alk. earth ***metal***, and transition ***metal*** ions, SQ-dye in poly(vinylchloride)-poly(vinyl acetate)- poly(vinyl alc.) copolymer film showed the highest selectivity to Cu²⁺ ion. Although the interaction between SQ-dye and ***metal*** ions has not been well understood, both cooperative "hard-soft" ***metal*** ion- ***ligand*** interaction and size-selective recognition of Cu²⁺ ion to SQ-dye may contribute to high selectivity. Furthermore, addnl. sensitivity in the detection of Cu²⁺ ion by SPR was obtained by matching the wavelength of probing radiation of SPR and absorption maximum of SQ-dye at 670 nm, which allow to detect small changes in the refractive index by ***complex*** formation on the sensing surface. Details of spectroscopic investigation of Cu²⁺ ion ***complex*** with SQ-dye will be included in the presentation. This result may apply in development of the Cu²⁺ ion selective sensor for medical, biochem., and environmental applications.

L4 ANSWER 13 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2001:626116 CAPLUS <<LOGINID::20060727>>

DN 135:192503

ED Entered STN: 29 Aug 2001

TI Simultaneous multimodal measurement of physiological function

IN Combs, Arthur H.; Dorshow, Richard B.; Bugaj, Joseph E.; Rajagopalan, Raghavan; Achilefu, Samuel I.

PA Mallinckrodt Inc., USA

SO U.S., 12 pp., Cont.-in-part of U.S. Ser. No. 258,148.

CODEN: USXXAM

DT Patent

LA English

IC ICM A61K049-00

ICS G01N031-00

INCL 424009100

CC 9-5 (Biochemical Methods)

Section cross-reference(s): 13

FAN.CNT 4

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	US 6280703	B1	20010828	US 2000-519455	20000306
	US 5928625	A	19990727	US 1997-816332	19970313
	EP 1618899	A2	20060125	EP 2005-77066	19980129
	EP 1618899	A3	20060201		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	US 6228344	B1	20010508	US 1999-258148	19990226
	WO 2001066152	A1	20010913	WO 2001-US6589	20010301
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1263477	A1	20021211	EP 2001-918287	20010301
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2003525914	T2	20030902	JP 2001-564804	20010301
	EP 1604689	A1	20051214	EP 2005-76919	20010301
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
PRAI	US 1997-816332	A2	19970313		
	US 1999-258148	A2	19990226		
	EP 1998-903793	A3	19980129		
	US 2000-519455	A	20000306		
	EP 2001-918287	A3	20010301		
	WO 2001-US6589	W	20010301		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 6280703	ICM	A61K049-00
	ICS	G01N031-00
	INCL	424009100
	IPCI	A61K0049-00 [ICM,7]; G01N0031-00 [ICS,7]
	IPCR	A61K0049-00 [I,A]; A61K0049-00 [I,C*]
	NCL	424/009.100; 424/001.110; 424/009.600
	ECLA	A61K049/00P4F
US 5928625	IPCI	A61K0049-00 [ICM,6]; G01N0031-00 [ICS,6]
	IPCR	A61K0049-00 [I,A]; A61K0049-00 [I,C*]
	NCL	424/009.100; 424/001.110; 424/009.600
	ECLA	A61K049/00P4F
EP 1618899	IPCI	A61K0049-00 [I,A]
US 6228344	IPCI	A61K0049-00 [ICM,7]; G01N0031-00 [ICS,7]
	IPCR	A61K0049-00 [I,A]; A61K0049-00 [I,C*]
	NCL	424/009.100; 424/001.110; 424/009.600
	ECLA	A61K049/00P4F
WO 2001066152	IPCI	A61K0049-00 [ICM,7]
	IPCR	A61K0049-00 [I,A]; A61K0049-00 [I,C*]
	ECLA	A61B005/00P; A61K049/00F
EP 1263477	IPCI	A61K0049-00 [ICM,6]
	IPCR	A61K0049-00 [I,A]; A61K0049-00 [I,C*]
JP 2003525914	IPCI	A61K0049-00 [ICM,7]; A61K0051-00 [ICS,7]
	IPCR	A61K0049-00 [I,A]; A61K0049-00 [I,C*]
EP 1604689	IPCI	A61K0049-00 [ICM,7]; A61B0005-00 [ICS,7]; G01N0033-00 [ICS,7]
	ECLA	A61B005/0275; A61B005/00P; A61B005/00P4; A61K049/00F; A61K049/00P4F; A61K051/04L

AB A method of measuring physiol. function of a group of body cells, includes the step of selecting a detectable agent capable of absorbing or emitting a measurable electromagnetic emission. The agent is introduced into body fluid which contacts the group of body cells. The absorbance or emission is measured, and physiol. function is detd. based on measurement of the absorbance or emission. Measurements may be made noninvasively or with the use of a modified pulmonary artery catheter. Multiple agents which can be distinguished from each other can be utilized simultaneously to measure multiple physiol. functions at the same time. Aq. solns. of indocyanine green dye at 0.42 mg/mL and fluorescein-polyaspartic acid bioconjugate at 8 mg/mL were ***mixed*** together. This combined

soln. was injected i.v. into a rat and fluorescence was monitored from the ear. Incident light on the ear was at both 488 nm and 780 nm. Two detectors of fluorescent light were set at 520 nm and 830 nm. The two clearance curves are readily distinguishable. ICG is known to be cleared from the blood stream by the liver and fluorescein-polyaspartic acid is cleared by the kidney. The curves show the simultaneous measurement of both hepatic and renal function.

ST multimodal detn physiol function tracer; liver function indocyanine green fluorometry; kidney function fluorescein polyaspartate conjugate fluorometry

IT Chromophores
Paramagnetic materials
(as tracers; simultaneous multimodal measurement of physiol. function)

IT Medical goods
(catheters; simultaneous multimodal measurement of physiol. function)

IT Biochemical molecules
(conjugates with polyanionic fluorescein, as tracers; simultaneous multimodal measurement of physiol. function)

IT Imaging agents
(contrast, radiog.; simultaneous multimodal measurement of physiol. function)

IT Unsaturated compounds
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(cyanines, as tracers; simultaneous multimodal measurement of physiol. function)

IT Ear
(fluorescence monitoring in rat; simultaneous multimodal measurement of physiol. function)

IT Tracers
(fluorescent; simultaneous multimodal measurement of physiol. function)

IT Fluorescent substances
(fluorophores, as tracers; simultaneous multimodal measurement of physiol. function)

IT Dyes
(indocyanine, as tracers; simultaneous multimodal measurement of physiol. function)

IT Drug delivery systems
(injections, i.v., tracer administration by; simultaneous multimodal measurement of physiol. function)

IT Drug delivery systems
(injections, tracer administration by; simultaneous multimodal measurement of physiol. function)

IT UV and visible spectroscopy
(light-scattering; simultaneous multimodal measurement of physiol. function)

IT Blood vessel
(near surface of skin; simultaneous multimodal measurement of physiol. function)

IT Skin
(noninvasive surface monitoring through; simultaneous multimodal measurement of physiol. function)

IT Artery
(pulmonary, modified catheter; simultaneous multimodal measurement of physiol. function)

IT Isotope indicators
(radiopharmaceutical tracers; simultaneous multimodal measurement of physiol. function)

IT Animal tissue
Blood analysis
Body, anatomical
Body fluid
Brain
Cell
Endoscopes
Fluorometry
Heart
Kidney
Liver
Neoplasm
Organ, animal

Physiology, animal
Spectroscopy
Tracers
(simultaneous multimodal measurement of physiol. function)

IT Particles
(superparamagnetic iron oxide, as tracers; simultaneous multimodal measurement of physiol. function)

IT Paramagnetic materials
(superparamagnetic, iron oxide particles, as tracers; simultaneous multimodal measurement of physiol. function)

IT Fluorescent substances
(tracers; simultaneous multimodal measurement of physiol. function)

IT Fiber optic sensors
(wavelength-specific, in modified pulmonary artery catheters; simultaneous multimodal measurement of physiol. function)

IT 881-17-4 3599-32-4, Indocyanine green 12558-57-5, 51Cr-EDTA 12775-34-7, 99mTc-DTPA 14133-76-7D, ***complexes***, biological studies 20694-16-0 59160-29-1D, HIDA, Tc-99m ***complexes*** 83150-76-9D, Octreotide, Tc-99m DTPA conjugates 104348-91-6, 99mTc-MAG3 109581-73-9 121281-41-2 127502-06-1D, Tetrofosmin, Tc-99m ***complexes*** 357171-45-0
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(as tracer; simultaneous multimodal measurement of physiol. function)

IT 2321-07-5D, Fluorescein, compds. and polyanionic bioconjugates 25608-40-6D, Polyaspartic acid, conjugates with fluorescein 26063-13-8D, Polyaspartic acid, conjugates with fluorescein 78675-98-6D, ***Squaraine***, compds.
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(as tracers; simultaneous multimodal measurement of physiol. function)

IT 1309-37-1, Iron oxide, biological studies
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(superparamagnetic particles, as tracers; simultaneous multimodal measurement of physiol. function)

RE.CNT 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L4 ANSWER 14 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2000:452976 CAPLUS <<LOGINID::20060727>>

DN 133:67960

ED Entered STN: 06 Jul 2000

TI Investigation of the spectral properties of a *****squarylium*****
near-infrared dye and its *****complexation***** with Fe(III) and Co(II)
ions

AU Tarazi, Leila; Narayanan, Nara; Patonay, Gabor

CS Department of Chemistry, Georgia State University, Atlanta, GA, 30303, USA

SO Microchemical Journal (2000), 64(3), 247-256

CODEN: MICJAN; ISSN: 0026-265X

PB Elsevier Science B.V.

DT Journal

LA English

CC 79-6 (Inorganic Analytical Chemistry)

Section cross-reference(s): 68, 72

AB The spectral features of the *****squarylium***** near-IR (NIR) dye NN525
in *****different***** solns. and its *****complexation***** with several
*****metal***** ions were studied. The absorbance max. of the dye is
.lambda. = 663 nm in MeOH. This value matches the output of a commonly
available laser diode (650 nm), thus making use of such a source practical
for excitation. The emission wavelength of the dye in MeOH is .lambda.em
= 670 nm. The addn. of either Fe(III) ion or Co(II) ion resulted in
fluorescence quenching of the dye. The Stern-Volmer quenching const.,
KSV, was calcd. from the Stern-Volmer plot to be KSV = 2.70 .times. 10⁷
M⁻¹ for Co(II) ion. The KSV value for Fe(III) ion could not be
established due to the nonlinearity of the Stern-Volmer plot and the
modified Stern-Volmer plot for this ion. The detection limit is 6.24
.times. 10⁻⁸ M for Fe(III) ion and 1.55 .times. 10⁻⁵ M for Co(III) ion.
The molar ratio of the *****metal***** to the dye is 1:1 for both
*****metal***** ions. The stability const., KS, of the *****metal***** -dye
*****complex***** is 3.14 .times. 10⁶ M⁻¹ for the Fe-dye *****complex*****
and 2.64 .times. 10⁵ M⁻¹ for the Co-dye *****complex*****.

ST spectral property *****squarylium***** IR dye; iron detn fluorescence
quenching *****squarylium***** IR dye; cobalt detn fluorescence quenching
*****squarylium***** IR dye; stability const iron cobalt *****complex*****
*****squarylium***** dye

IT *****Complexation*****
(investigation of the spectral properties of a *****squarylium*****
near-IR dye and its *****complexation***** with Fe(III) and Co(II)
ions)

IT Fluorescence quenching
Fluorometry
(iron and cobalt detn. by fluorescence quenching of a
*****squarylium***** near-IR dye)

IT Fluorescence
(of a *****squarylium***** near-IR dye)

IT Formation constant
(of iron and cobalt *****complexes***** with a *****squarylium*****
near-IR dye)

IT 7439-89-6, Iron, analysis 7440-48-4, Cobalt, analysis
RL: ANT (Analyte); ANST (Analytical study)
(detn. by fluorescence quenching of a *****squarylium***** near-IR dye)

IT 256924-69-3, NN525
RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical
study); USES (Uses)
(investigation of the spectral properties of a *****squarylium*****
near-IR dye and its *****complexation***** with Fe(III) and Co(II)
ions)

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L4 ANSWER 15 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2000:379774 CAPLUS <<LOGINID::20060727>>
 DN 133:35693
 ED Entered STN: 08 Jun 2000
 TI Novel ***squaraine*** signaling Zn(II) ions: three-state fluorescence response to a single input
 AU Dilek, Gulay; Akkaya, Engin U.
 CS Department of Chemistry, Middle East Technical University, Ankara, TR-06531, Turk.
 SO Tetrahedron Letters (2000), 41(19), 3721-3724
 CODEN: TELEAY; ISSN: 0040-4039
 PB Elsevier Science Ltd.
 DT Journal
 LA English
 CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
 Section cross-reference(s): 22, 27
 AB A novel ***metal*** ion sensitive 2,3,3-trimethyl-3H-indole-derived ***squaraine*** dye showing ***different*** fluorescence responses depending on the ***complexation*** stoichiometry was synthesized. Thus, 3 levels of signals are attainable by varying the Zn(II) ion concn.
 ST zinc ***squaraine*** deriv ***complex*** fluorescence
 IT Fluorescence
 (zinc ***complex*** with ***squaraine*** deriv. with three-state fluorescence response to single input)
 IT 7440-66-6D, Zinc, ***squaraine*** deriv. ***complex*** , properties 273759-71-0D, zinc ***complex***

RL: PRP (Properties)
(zinc ***complex*** with ***squaraine*** deriv. with
three-state fluorescence response to single input)
IT 1640-39-7 2212-32-0 2892-51-5 273759-70-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(zinc ***complex*** with ***squaraine*** deriv. with
three-state fluorescence response to single input)
RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L4 ANSWER 16 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1997:630852 CAPLUS <<LOGINID::20060727>>

DN 127:294749
ED Entered STN: 03 Oct 1997
TI Putty compositions and repairing method therewith
IN Sukejima, Hajime; Tomita, Shinji; Suzuki, Ryuichi
PA Kansai Paint Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF

DT Patent
LA Japanese
IC ICM C09D005-34
ICS C08F290-00; C08F290-06; C09D004-00; C09D004-06
CC 42-11 (Coatings, Inks, and Related Products)

FAN.CNT 1
PATENT NO. KIND DATE APPLICATION NO. DATE

PI JP 09249831 A2 19970922 JP 1996-58610 19960315
PRAI JP 1996-58610 19960315

CLASS
PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

JP 09249831 ICM C09D005-34
ICS C08F290-00; C08F290-06; C09D004-00; C09D004-06
IPCI C09D0005-34 [ICM,6]; C08F0290-00 [ICS,6]; C08F0290-06
[ICS,6]; C09D0004-00 [ICS,6]; C09D0004-06 [ICS,6]

GI

/ Structure 6 in file .gra /

AB Title compns. contain polymerizable unsatd. group-contg. resins,
polymerizable unsatd. compds., and near IR initiators. A compn. contg.
Ripoxy SP 1507, styrene, and a cyanine colorant ***complex***
initiator (I) was curable by 1500-W halogen lamp set at a 15-cm distance
over 10 min and showed good adhesion to soft steel or ***Al*** panels
and to acrylic urethane topcoats.
ST near IR initiator unsatd polymer putty; ***metal*** adhesion near IR
curable putty; coatability near IR curable putty

IT Epoxy resins, uses
Polyurethanes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(acrylic; near IR initiator-contg. unsatd. resin putty with good
adhesion to ***metals*** and topcoats)

IT Dyes
(***complexes*** ; near IR initiator-contg. unsatd. resin putty with
good adhesion to ***metals*** and topcoats)

IT Acrylic polymers, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(epoxy; near IR initiator-contg. unsatd. resin putty with good adhesion
to ***metals*** and topcoats)

IT Putty
(near IR initiator-contg. unsatd. resin putty with good adhesion to
metals and topcoats)

IT Catalysts
(photochem., near IR; near IR initiator-contg. unsatd. resin putty with
good adhesion to ***metals*** and topcoats)

IT Acrylic polymers, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(polyurethane-; near IR initiator-contg. unsatd. resin putty with good
adhesion to ***metals*** and topcoats)

IT Polyesters, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(unsatd.; near IR initiator-contg. unsatd. resin putty with good
adhesion to ***metals*** and topcoats)

IT 12243-46-8
RL: CAT (Catalyst use); USES (Uses)
(blends with ***metal*** ***chelates*** ; near IR
initiator-contg. unsatd. resin putty with good adhesion to
metals and topcoats)

IT 12176-31-7
RL: CAT (Catalyst use); USES (Uses)
(blends with ***squarylium*** colorants; near IR initiator-contg.
unsatd. resin putty with good adhesion to ***metals*** and
topcoats)

IT 126609-59-4 153121-11-0D, ruthenium ***complexes*** , borate
salts
RL: CAT (Catalyst use); USES (Uses)
(near IR initiator-contg. unsatd. resin putty with good adhesion to
metals and topcoats)

IT 7429-90-5, Aluminum, miscellaneous
RL: MSC (Miscellaneous)
(near IR initiator-contg. unsatd. resin putty with good adhesion to
metals and topcoats)

IT 184179-27-9, Isobornyl acrylate-Ripoxy SP 5003 copolymer 191089-69-7,
Ripoxy SP 1507-styrene copolymer 191089-70-0, 2-Hydroxyethyl
acrylate-isobornyl acrylate-Ripoxy SP 1507 copolymer 191159-17-8
191339-02-3 191339-10-3, Acrydic A 801P-Duranate TPA 90E-Ripoxy SP
1507-styrene copolymer 196521-58-1, Duranate MF B;2-hydroxyethyl
acrylate;Ripoxy SP 5003 copolymer
RL: TEM (Technical or engineered material use); USES (Uses)
(near IR initiator-contg. unsatd. resin putty with good adhesion to
metals and topcoats)

IT 7440-18-8D, Ruthenium, ***complexes*** with quinolinone derivs.,
borate salts, uses
RL: CAT (Catalyst use); USES (Uses)
(soft; near IR initiator-contg. unsatd. resin putty with good adhesion
to ***metals*** and topcoats)

IT 12597-69-2, Steel, miscellaneous
RL: MSC (Miscellaneous)
(soft; near IR initiator-contg. unsatd. resin putty with good adhesion
to ***metals*** and topcoats)

L4 ANSWER 17 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1995:591931 CAPLUS <<LOGINID::20060727>>

DN 123:241686

ED Entered STN: 07 Jun 1995

TI ***Squaraine*** Chemistry. Absorption, Fluorescence Emission, and
Photophysics of Unsymmetrical ***Squaraines***

AU Law, Kock-Yee

CS Joseph C. Wilson Center for Research and Technology, Xerox Corporation,

Webster, NY, 0114-39, USA
SO Journal of Physical Chemistry (1995), 99(24), 9818-24
CODEN: JPCHAX; ISSN: 0022-3654
PB American Chemical Society
DT Journal
LA English
CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)
Section cross-reference(s): 73
AB The absorption, fluorescence emission, and photophysics of
4-(methoxyphenyl)-4'-[(dimethylamino)phenyl] ***squaraine*** and its
derivs. (USq1-USq14) a class of unsym. donor-acceptor-donor (D-A-D)
compds., have been investigated. Similar to sym. and pseudo-unsym. (with
two ***different*** aniline rings) ***squaraines***, USq1-USq14
also exhibit intense absorption bands in the visible region. Their
absorption maxima (.lambda.max) range from 562 to 593 nm and are
blue-shifted relative to those of sym. and pseudo-unsym.
squaraines. The blue-shift is attributed to the decrease in the
D-A-D CT character, arising from the introduction of a less
electron-donating anisole ring. As it turned out, the introduction of
asymmetry through the anisole ring has a significant impact on the
electronic spectra. The asymmetry in USq1-USq14 enhances vibronic
coupling during electronic transition, producing vibrational fine
structures in both absorption and fluorescence spectra. The vibronic
coupling is particularly pronounced when the C-O group in the central
four-membered ring is H-bonded, either intramolecularly or
intermolecularly with solvent mols. USq1-USq14 are shown to form solvent
complexes with solvent mols. The multiple fluorescences obsd. for
these compds., although quite ***complex***, are shown to be the sum
of the vibronic bands of the unsym. ***squaraine*** and its
complex. At room temp. in soln., the .phi.f values for USq1-USq14
are a factor of .gtoreq.30 lower than those of sym. and pseudo-unsym.
squaraines. Their lifetimes are .ltoreq.0.25 ns. There is a
large temp. effect on both .phi.f and lifetime. At 77 K in a
2-methyltetrahydrofuran matrix, the .phi.f values approach .gtoreq.0.5 and
the fluorescence lifetimes increase to a const. value, .apprx.2.4 ns.
Hydroxy unsym. ***squaraines*** are an exception; they exhibit
biexponential decays (.apprx.2.4 ns and a subnanosecond decay) at 77 K in
2-methyltetrahydrofuran. The observation may be attributable to a
conformational effect. The large temp. effect on the photophys. processes
indicates that there exists an efficient radiationless decay process for
these compds. Evidence is provided that rotation of the C-C bond between
the anisole ring and the four-membered ring is responsible for the
radiationless decay. The fast decay is attributable to the single-bond
character of the rotating C-C bond in these compds. Substituents, both in
the aniline ring and the anisole ring, are shown to have effects on the
electronic spectra. These substituent effects are discussed in terms of
their effects on the D-A-D CT character of the ***squaraine***
chromophore.
ST photophysics fluorescence optical absorption ***squaraine***
chromophore; electrophotog photoreceptor unsym ***squaraine***
photophys
IT Fluorescence
Substituent effect
Ultraviolet and visible spectra
(absorption and fluorescence lifetime and photophysics of unsym.
squaraines)
IT Electrophotographic photoconductors and photoreceptors
(absorption and fluorescence lifetime and photophysics of unsym.
squaraines for)
IT Energy level transition
(electronic, absorption and fluorescence lifetime and photophysics of
unsym. ***squaraines***)
IT 126288-46-8 126288-47-9 126288-48-0 126288-49-1 126288-50-4
126288-52-6 126288-53-7 126288-54-8 126288-55-9 126288-56-0
126288-57-1 126288-58-2 142692-37-3 142692-39-5
RL: PEP (Physical, engineering or chemical process); PRP (Properties);
PROC (Process)
(absorption and fluorescence lifetime and photophysics of unsym.
squaraines)

AN 1995:294823 CAPLUS <<LOGINID::20060727>>
 DN 122:242313
 ED Entered STN: 14 Jan 1995
 TI Polymerization initiation photosensitizers from ***squarylium*** dyes
 IN Mitekura, Hirofumi; Suga, Sadaji; Yasui, Shigeo
 PA Nippon Kanko Shikiso Kenkyusho, Japan
 SO Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C08F002-50
 ICS C07D209-12; C09B056-16; G03F007-028
 CC 41-8 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
 Section cross-reference(s): 35
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06287210	A2	19941011	JP 1993-115142	19930405
PRAI JP 1993-115142		19930405		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 06287210	ICM	C08F002-50
	ICS	C07D209-12; C09B056-16; G03F007-028
	IPCI	C08F0002-50 [ICM,5]; C08F0002-46 [ICM,5,C*]; C07D0209-12 [ICS,5]; C07D0209-00 [ICS,5,C*]; C09B0056-16 [ICS,5]; C09B0056-00 [ICS,5,C*]; G03F0007-028 [ICS,5]

OS MARPAT 122:242313
 GI

/ Structure 7 in file .gra /

AB The photosensitizers are composed of ***squarylium*** dyes I (R1 = alkyl, alkoxy; R2 = H, alkyl, alkoxy; R3, R4 = C1-10 alkyl which may be interrupted by O). Thus, 0.05 mol 1,3,3,5-tetramethyl-2-methyleneindoline and 0.0025 mol 1,2-dihydroxy-1-cyclobutene-3,4-dione were heated under reflux in a mixt. of BuOH and benzene, cooled, pptd., filtered, washed, and dried to give 5.4 g of a cryst. material with m.p. 305.degree. and .lambda.max 642 nm in CH2Cl2, 1 part of which was ***mixed*** with acrylic acid-methacrylate ester copolymer 100, pentaerythritol triacrylate 100, 3,3',4,4'-tetrakis(tert-butylperoxycarbonyl)benzophenone 8, and Et Cellosolve 900 parts, applied to an ***Al*** plate, overcoated with poly(vinyl alc.), and exposed to 630-nm irradiation, showing sensitivity 0.6 mJ/cm2.

ST photosensitizer ***squarylium*** pigment
 IT Dyes
 (***squarylium*** dyes as photosensitizers for polymn.)
 IT Polymerization catalysts
 (photochem., ***squarylium*** dyes as photosensitizers for polymn.)
 IT 77473-08-6, 3,3',4,4'-Tetrakis(tert-butylperoxycarbonyl)benzophenone
 RL: CAT (Catalyst use); USES (Uses)
 (photopolymerizable compns. contg.; ***squarylium*** dyes as photosensitizers for polymn.)
 IT 79-10-7D, 2-Propenoic acid, polymers with methacrylate esters 79-41-4D, esters, polymers with acrylic acid 103106-58-7, Carboset XL 44
 RL: NUU (Other use, unclassified); USES (Uses)
 (photopolymerizable compns. contg.; ***squarylium*** dyes as photosensitizers for polymn.)
 IT 3524-68-3
 RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (photopolymerizable compns. contg.; ***squarylium*** dyes as photosensitizers for polymn.)
 IT 161763-64-0P
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
 (prepn. of ***squarylium*** dyes as photosensitizers for polymn.)
 IT 118-12-7, 1,3,3-Trimethyl-2-methyleneindoline 2892-51-5, Squaric acid 2892-63-9, 3-Cyclobutene-1,2-dione, 3,4-dichloro- 39578-87-5,

1,3,3,5-Tetramethyl-2-methyleneindoline
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (prepn. of ***squarylium*** dyes as photosensitizers for polymn.)

IT 68842-67-1P 162342-84-9P
 RL: CAT (Catalyst use); IMF (Industrial manufacture); PRP (Properties);
 PREP (Preparation); USES (Uses)
 (***squarylium*** dyes as photosensitizers for polymn.)

IT 125597-33-3 162342-81-6 162342-82-7 162342-83-8
 RL: CAT (Catalyst use); PRP (Properties); USES (Uses)
 (***squarylium*** dyes as photosensitizers for polymn.)

L4 ANSWER 19 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1995:25613 CAPLUS <<LOGINID::20060727>>
 DN 122:326239
 ED Entered STN: 08 Nov 1994
 TI Large photorefractive effect in a thermally decomposed polymer compared
 with that in molecularly doped systems
 AU Yokoyama, Kenji; Arishima, Koichi; Sukegawa, Ken
 CS NTT Opto-electronics Lab., Tokai/Ibaraki, 319-11, Japan
 SO Applied Physics Letters (1994), 65(2), 132-4
 CODEN: APPLAB; ISSN: 0003-6951
 DT Journal
 LA English
 CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 Section cross-reference(s): 73, 76

AB Photorefractive polymers with the same electrooptic effect were fabricated
 to investigate the photorefractive effects in ***different***
 photoconductive systems. The photoconduction in the polymers was varied
 by the addn. of ***squarylium*** dye to diethylaminobenzaldehydediphen
 ylhydrazone (DEH), by the formation of a charge-transfer ***complex***
 between tetracyanoquinodimethane and DEH, and by the thermal decompn. of
 DEH. The largest photorefractive effect was obsd. in the thermally
 decompd. polymer among these polymers. A diffraction efficiency of 1.1%
 and a beam-coupling gain coeff. of 10 cm-1 were achieved in a 34.9 V/.mu.m
 d.c. elec. field.

ST photorefractive effect photoconductive polymer system; electrooptic effect
 photorefractive photoconductive polymer system

IT Photorefractive effect
 (in ***different*** photoconductive systems)

IT Polycarbonates, properties
 RL: PRP (Properties)
 (large photorefractive effect in thermally decompd. photoconductor
 system of)

IT Electrooptical effect
 (photorefractive effect in ***different*** photoconductive systems)

IT Photoconductors
 (photorefractive effect in photoconductive system contg. doped polymer
 matrix)

IT Electrophotographic photoconductors and photoreceptors
 (photorefractive effect in photoconductive system contg. doped polymer
 matrix in relation to)

IT Dyes
 (***squarylium*** dye dopant; photorefractive effect in
 photoconductive system contg. doped polymer matrix and
 squarylium)

IT 1518-16-7, TCNQ 68189-23-1, p-Diethylaminobenzaldehydediphenylhydrazone
 RL: PRP (Properties)
 (dopant; photorefractive effect in photoconductive system contg. doped
 polymer matrix and)

IT 88422-19-9
 RL: PRP (Properties)
 (photorefractive effect in photoconductive system contg. doped polymer
 matrix and)

IT 9011-14-7, PMMA
 RL: PRP (Properties)
 (photorefractive effect in photoconductive system of)

L4 ANSWER 20 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1992:662967 CAPLUS <<LOGINID::20060727>>
 DN 117:262967
 ED Entered STN: 26 Dec 1992

TI Encoder having an atomic- or molecular-structure reference scale, and a scale member for it
IN Nose, Hiroyasu; Kawase, Toshimitsu; Miyazaki, Tohsihiko; Oguchi, Takahiro; Yamano, Akihiko
PA Canon K. K., Japan
SO U.S., 14 pp.
CODEN: USXXAM
DT Patent
LA English
IC ICM G01N027-00
INCL 324071100
CC 76-3 (Electric Phenomena)
Section cross-reference(s): 73, 75

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5150035	A	19920922	US 1990-515872	19900427
	EP 403766	B1	19950315	EP 1990-107928	19900426
	R: BE, CH, DE, FR, GB, IT, LI, NL, SE				
PRAI	JP 1989-105889	A	19890427		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 5150035	ICM	G01N027-00
	INCL	324071100
	IPCI	G01N0027-00 [ICM,5]
	IPCR	G01B0007-28 [I,A]; G01B0007-28 [I,C*]
	NCL	324/071.100; 250/306.000; 349/135.000; 349/187.000; 977/851.000; 977/872.000
EP 403766	IPCI	G01B0007-28 [ICM,5]; G01B0015-04 [ICS,5]; G01B0015-00 [ICS,5,C*]; G01N0027-00 [ICS,5]; G11B0009-00 [ICS,5]
	ECLA	G01B007/28; G01N027/00F

AB The encoder, esp. for position detn. in semiconductor device manuf., has a ref. scale having a periodic structure of atoms or mols. in a predetd. direction; a probe having a tip facing the ref. scale, which detects the structural variation of the periodic structure; and a means for detecting the amt. of relative displacement between the ref. scale and the probe along the predetd. direction from the structural variation information obtained by the probe: the ref. scale is provided with a substantially continuous at. or mol. structure in which structural variations are substantially not detected in a direction orthogonal to the predetd. direction. The ref. scale may be a mol. oriented film of a liq. crystal or a cyanine, xanthine, or ***squarylium*** dye, or alternating layers of ***different*** compd. semiconductors.

ST encoder atomic mol ref scale; position detn encoder; liq crystal ref scale encoder; dye mol ref scale encoder; compd semiconductor multilayer ref scale encoder

IT Semiconductor devices
(encoder for position detn. in manuf. of, having at.- or mol.-structure ref. scale)

IT Dyes, cyanine
(ref. scales from, in encoders for position detn.)

IT Dyes
(***squarylium*** , ref. scales from, in encoders for position detn.)

IT Liquid crystals
(smectic, ref. scales from, in encoders for position detn.)

IT 1303-00-0, Gallium arsenide, uses 22398-80-7, Indium phosphide, uses 37382-15-3, Aluminum gallium arsenide ((***Al*** ,Ga)As) 106070-22-8, Aluminum gallium indium arsenide ((***Al*** ,Ga,In)As) 106070-25-1, Gallium indium arsenide
RL: USES (Uses)

(ref. scales contg. layers of, in encoders for position detn.)

IT 52709-84-9, 4-Cyano-4'-n-octylbiphenyl
RL: USES (Uses)
(ref. scales from, in encoders for position detn.)

L4 ANSWER 21 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1991:15621 CAPLUS <<LOGINID::20060727>>

DN 114:15621

ED Entered STN: 12 Jan 1991

TI Electrical properties of gold/polyimide/ ***squarylium*** -arachidic

acid junctions fabricated by the Langmuir-Blodgett technique

AU Iwamoto, Mitsumasa; Shidoh, Shunichi

CS Dep. Electr. Electron. Eng., Tokyo Inst. Technol., Tokyo, 152, Japan

SO Japanese Journal of Applied Physics, Part 1: Regular Papers, Short Notes
& Review Papers (1990), 29(10), 2031-7
CODEN: JAPNDE; ISSN: 0021-4922

DT Journal

LA English

CC 76-3 (Electric Phenomena)
Section cross-reference(s): 66

AB ***Metal*** -insulator-semiconductor (MIS) junction was fabricated
having the structure of a Au-polyimide (PI)/ ***squaryllium***
dye-arachidic acid (SQ-C20) ***mixed*** system by the
Langmuir-Blodgett (LB) technique. A PI LB film becomes a good elec.
insulator even when the no. of deposited layers is 5. From the
capacitance-voltage (C-V) measurements, it was found that a (SQ-C20)
multilayered film is depleted at the interface between the PI layer and
the (SQ-C20) layer even when biasing voltage was zero millivolt because
pos. excess charges are displaced from the gate-Au electrode to the PI
layer as deposited. The polyimide layer incorporated in the junctions
makes a significant contribution to the elec. conduction, and asym.
current-voltage (I-V) characteristics were obtained for the junctions.

ST gold polyimide squaryllium arachidic LB junction; polyimide MIS junction
LB fabrication; squaryllium arachidic acid MIS LB fabrication

IT Polyimides, uses and miscellaneous
RL: USES (Uses)
(MIS from squaryllium-arachidic acid with overlayer of, and gold
overlayer, Langmuir-Blodgett method of fabrication of)

IT Diodes
(MIS, gold/polyimide/squaryllium-arachidic acid, Langmuir-Blodgett
technique for)

IT 43134-09-4
RL: USES (Uses)
(MIS fabrication from gold polyimide and layer of arachidic acid with,
Langmuir-Blodgett technique for)

IT 506-30-9, Arachidic acid
RL: USES (Uses)
(MIS junction fabrication from gold overlayer on polyimide on
squaryllium mixt. with, Langmuir-Blodgett technique for)

IT 7440-57-5, Gold, uses and miscellaneous
RL: USES (Uses)
(MIS junction of polyimide on squaryllium-arachidic acid with overlayer
of, Langmuir-Blodgett technique for)

L4 ANSWER 22 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1991:12635 CAPLUS <<LOGINID::20060727>>

DN 114:12635

ED Entered STN: 12 Jan 1991

TI Preparations of highly functional Langmuir-Blodgett films

AU Kawabata, Yasujiro

CS Natl. Chem. Lab. Ind., Tsaskuba, 305, Japan

SO Nippon Kagaku Kaishi (1990), (10), 1087-95
CODEN: NKAKB8; ISSN: 0369-4577

DT Journal

LA Japanese

CC 66-1 (Surface Chemistry and Colloids)
Section cross-reference(s): 28, 38, 74, 76

AB Amphiphilic compds. were synthesized for the fabrication of LB films with
new functions and unique structures. ***Mixed*** layers of
squaryllium dye and fatty acid form supermonomol. structures where
the monolayers or multilayers of the pure dye exist below the monolayer of
the fatty acid at the air-water interface. 00ng-chain derivs. of
cyclodextrin form monolayers and are used for constructing host-guest LB
films. These host-guest LB films show remarkable photochem. reactivity
and mol. recognition ability. Amphiphilic compds. having charge-transfer
complex moieties were synthesized and their elec. conds. were
studied. The ***metal*** (dmit)₂ derivs. formed charge-transfer
complexes with long-chain ammonium ions. The LB films were
obtained with these ***complexes***, which showed high conds. with
metallic temp. dependences. The hydrophobic part of an amphiphilic
charge-transfer ***complex*** was functionalized by introducing a
switching unit (azobenzene) which perceives an external stimulus such as

light and heat, causing a change in the cond. of the LB film.

ST Langmuir Blodgett film elec cond; ***squarylium*** dye fatty acid
supramol structure; cyclodextrin host guest LB film; photochem host guest
LB film; recognition mol host guest LB film; charge transfer
complex LB film; switching elec photo LB film; azobenzene
amphiphile LB film switching

IT Surface pressure
(-area isotherms, of amphiphilic dyes, Langmuir-Blodgett films in
relation to)

IT Surface area
(-pressure isotherms, of amphiphilic dyes, Langmuir-Blodgett films in
relation to)

IT Fatty acids, uses and miscellaneous
RL: USES (Uses)
(Langmuir-Blodgett films)

IT Charge-transfer ***complexes***
Inclusion compounds
RL: USES (Uses)
(Langmuir-Blodgett films contg.)

IT Dyes
(***squarylium*** , Langmuir-Blodgett films contg.)

IT Films
(Langmuir-Blodgett, prepn. of highly functionalized)

IT Electric conductors
(Langmuir-Blodgett film)

IT 1562-93-2D, inclusion compds. with cyclodextrins 6268-49-1D, inclusion
compds. with cyclodextrins 12619-70-4D, Cyclodextrin, derivs., inclusion
compds. 106323-22-2D, inclusion compds. with azobenzenes 106335-65-3D,
inclusion compds. with azobenzenes 106335-69-7D, inclusion compds. with
azobenzenes 110577-03-2D, inclusion compds. with azobenzenes
RL: USES (Uses)
(Langmuir-Blodgett films contg.)

IT 96189-28-5 101853-37-6 102149-36-0 117654-57-6
RL: USES (Uses)
(Langmuir-Blodgett films contg., elec. cond. of)

IT 506-30-9, Arachidic acid
RL: PRP (Properties)
(Langmuir-Blodgett films formed from ***squarylium*** dyes and)

IT 97521-39-6P 98987-51-0P 98987-52-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, for Langmuir-Blodgett film applications)

IT 2892-51-5, Squaric acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with indolium derivs.)

IT 34157-19-2 34157-23-8 34228-39-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with squaric acid)

IT 34344-25-7 117191-82-9 117204-99-6
RL: PRP (Properties)
(surface pressure-area isotherms for)

L4 ANSWER 23 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1990:242890 CAPLUS <<LOGINID::20060727>>

DN 112:242890

ED Entered STN: 23 Jun 1990

TI ***Squaraine*** chemistry: application of fluorescence spectroscopy
in modeling molecular interactions between ***squaraine*** particles
and poly(vinyl butyral) in xerographic devices

AU Law, Kock Yee

CS Webster Res. Cent., Xerox, Webster, NY, 14580, USA

SO Journal of Imaging Science (1990), 34(2), 38-44
CODEN: JISCEJ; ISSN: 8750-9237

DT Journal

LA English

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

AB The mol. interactions between photoactive ***squaraine*** particles of
bis(4-dimethylaminophenyl) ***squaraine*** (HSq) and poly(vinyl
butyral) (PVB) in solns. and in thin films in xerog. devices were modeling
by studying the fluorescence emission of HSq in solns. (THF, MeCOEt,
methylene chloride and EtOH) of PVB. Results reveal that the hydroxy
groups in PVB form ***complexes*** with HSq at the particle surface.

As a result of this ***complexation*** process, PVB polymer phys. adsorbs onto the surfaces of HSq particles, resulting in a steric stabilization of HSq particles and, consequently, stable dispersions of HSq and PVB in various solvents. Although solvent does have an effect on the polymer adsorption process, the effects on the dispersion stability and on the steric stabilization process are relatively small. On the other hand, a strong solvent effect on the xerog. properties was obsd. when HSq/PVB dispersions prep'd. from various solvents were used to fabricate ***squaraine*** charge generation layers (CGLs) in bilayer xerog. devices. Since the geometry and the chem. compn. of all devices tested were identical, the variations in xerog. properties suggest that the detailed interactions between HSq particles and PVB in the CGLs are ***different*** and are sensitive to the dispersing solvent. Making the assumption that any variations of interactions between HSq particles and PVB originate from the HSq/PVB dispersion (owing to the fast solvent evapn. in the solvent coating process), various particle-particle and particle-polymer interactions were studied qual. by shear viscosity measurements. The data from shear viscosity measurements correlate with the variation in xerog. properties. The important effect of the state of mol. interactions between HSq particles and PVB in the CGL on the xerog. properties of various HSq bilayer xerog. devices is discussed.

ST electrophotog photoreceptor ***squaraine*** polyvinyl butyral
IT Electrophotographic photoconductors
(composite, mol. interaction between ***squaraine*** particles and poly(vinyl butyral) in layer of)
IT Vinyl acetal polymers
RL: PRP (Properties)
(butyral, interaction of, with ***squaraine*** compd. in electrophotog. photoreceptor layer)
IT 43134-09-4, Bis(4-dimethylaminophenyl) ***squaraine***
RL: PROC (Process)
(interactions of, with poly(vinyl butyral) in electrophotog. photoreceptor layer)

L4 ANSWER 24 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1989:622083 CAPLUS <<LOGINID::20060727>>
DN 111:222083
ED Entered STN: 09 Dec 1989
TI Electrophotographic photoconductor containing ***squarylium*** compound charge-generating agent
IN Kuroda, Masami; Hattori, Yoshimasa; Furusho, Noboru; Sugata, Yoshinobu
PA Fuji Electric Co., Ltd., Japan
SO Ger. Offen., 20 pp.
CODEN: GWXXBX
DT Patent
LA German
IC ICM G03G005-06
ICS C07D333-04; C07D413-06; C07D417-06; C07D421-06; C07D409-06
ICI C07D293-12, C07D277-64, C07D263-56, C07D209-12
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3842253	A1	19890629	DE 1988-3842253	19881215
	DE 3842253	C2	19950810		
	JP 01159663	A2	19890622	JP 1987-317768	19871216
	JP 01273051	A2	19891031	JP 1988-103678	19880426
PRAI	JP 1987-317768	A	19871216		
	JP 1988-103678	A	19880426		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 3842253	ICM	G03G005-06
	ICS	C07D333-04; C07D413-06; C07D417-06; C07D421-06; C07D409-06
	ICI	C07D293-12, C07D277-64, C07D263-56, C07D209-12
	IPCI	G03G0005-06 [ICM,4]; C07D0333-04 [ICS,4]; C07D0333-00 [ICS,4,C*]; C07D0413-06 [ICS,4]; C07D0413-00 [ICS,4,C*]; C07D0417-06 [ICS,4]; C07D0417-00 [ICS,4,C*]; C07D0421-06 [ICS,4]; C07D0421-00 [ICS,4,C*]; C07D0409-06 [ICS,4]; C07D0409-00

[ICS,4,C*]; C07D0293-12 [ICI,4]; C07D0293-00
 [ICI,4,C*]; C07D0277-64 [ICI,4]; C07D0277-00
 [ICI,4,C*]; C07D0263-56 [ICI,4]; C07D0263-00
 [ICI,4,C*]; C07D0209-12 [ICI,4]; C07D0209-00 [ICI,4,C*]
 IPCR C07D0333-00 [I,C*]; C07D0333-20 [I,A]; C07D0409-00
 [I,C*]; C07D0409-14 [I,A]; C07D0413-00 [I,C*];
 C07D0413-14 [I,A]; C07D0417-00 [I,C*]; C07D0417-14
 [I,A]; G03G0005-06 [I,A]; G03G0005-06 [I,C*]
 ECLA C07D333/20; C07D409/14+333B+333B+209C+209C;
 C07D413/14+333B+333B+263B+263B;
 C07D417/14+333B+333B+277B+277B; G03G005/06B4B;
 G03G005/06D4D
 JP 01159663 IPCI G03G0005-06 [ICM,4]; C09B0057-00 [ICS,4]
 JP 01273051 IPCI G03G0005-06 [ICM,4]

OS MARPAT 111:222083
 GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Electrophotog. photoreceptors having a high sensitivity and excellent characteristics in repeated use contain a ***squarylium*** compd. of the formula I, II, or III (R1-R6 = H, halogen, alkyl, aryl, or NO2; R7, R8 = H or OH; R9, R10 = H, halogen, alkoxy, alkyl, NO2, or (un)substituted aryl; X = O, S, Se, or Me2C) as a charge-generating agent. Thus, an ***Al*** -coated PET film support was overcoated with a mixt. (***mixed*** for 3 h) contg. IV, Vylon 200 (polyester), 1-phenyl-3-(p-diethylaminostyryl)-5-(p-diethylaminophenyl)-2-pyrazolone, and THF, and dried to give a photoreceptor have excellent sensitivity (E1/2 = 7.3 lx-s).

ST ***squarylium*** compd charge generator electrophotog

IT Electrophotographic photoconductors
 (contg. ***squarylium*** compd. charge-generating agents, for improved sensitivity)

IT Onium compounds

RL: USES (Uses)

(***squarylium*** , as charge-generating agents in electrophotog. photoconductors)

IT	123702-54-5	123702-55-6	123702-56-7	123702-57-8	123702-58-9
	123702-59-0	123702-60-3	123702-61-4	123702-62-5	123702-63-6
	123702-64-7	123702-65-8	123702-66-9	123702-67-0	123702-68-1
	123702-69-2	123702-70-5	123702-71-6	123702-72-7	123702-73-8
	123702-74-9	123702-75-0	123702-76-1	123702-77-2	123702-78-3
	123702-79-4	123702-80-7	123702-81-8	123702-82-9	123702-83-0
	123702-84-1	123702-85-2	123702-86-3	123702-87-4	123702-88-5
	123702-89-6	123702-90-9	123702-91-0	123702-92-1	123728-03-0
	123728-04-1	123728-05-2	123728-06-3	123728-07-4	123728-08-5
	123728-09-6	123728-10-9	123728-11-0	123728-12-1	123728-13-2
	123728-14-3	123728-15-4	123728-16-5	123728-17-6	123728-18-7
	123728-19-8	123755-24-8	123755-25-9	123755-26-0	123755-27-1

RL: USES (Uses)

(electrophotog. photoreceptor contg. charge-generating agent from, with improved sensitivity)

L4 ANSWER 25 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1989:456919 CAPLUS <<LOGINID::20060727>>

DN 111:56919

ED Entered STN: 20 Aug 1989

TI ***Squaraine*** chemistry. A study of the solute-solvent
 complexation of ***squaraine*** in solvents by proton NMR spectroscopy

AU Law, Kock Yee

CS Webster Res. Cent., Xerox, Webster, NY, 14580, USA

SO Journal of Physical Chemistry (1989), 93(15), 5925-30

CODEN: JPCHAX; ISSN: 0022-3654

DT Journal

LA English

CC 22-10 (Physical Organic Chemistry)

AB The solute-solvent ***complexation*** process of ***squaraine***
 in org. solvents has been studied by proton NMR spectroscopy using the

model compd. bis[(4-dibutylamino)phenyl] ***squaraine*** (I). Two doublets of coupling const. of .apprx.9.5 Hz are obsd. for the arom. protons of I and the difference in chem. shift (.delta..alpha.-.delta..beta.) between them is found to be sensitive to solvent. The solvent effect on .delta..alpha.-.delta..beta. correlates not only with the solvent parameter .pi.*, but also with the absorption max. (.lambda.max) and the fluorescence quantum yield (.phi.f) of I. Since the general bathochromic effect of .pi.* on the .lambda.max and the variation of the .phi.f of I in ***different*** solvents are shown to be a result of the shift in equil. of the solute-solvent ***complexation*** process (equil. const. for the ***complex*** formation increases as .pi.* increases), the correlation of the NMR spectral data with parallel electronic spectral data implies that the variation of .delta..alpha.-.delta..beta. also originates from the solute-solvent ***complexation*** process. Because the .phi.f of I is shown to be dependent on the planarity of the ***squaraine*** structure, the correlation between .delta..alpha.-.delta.B and the .phi.f of I suggests that there is a conformational change in the ***squaraine*** structure assocd. with the ***complexation*** process; e.g., the ***squaraine*** structure becomes increasingly nonplanar as the solute-solvent assocn. increases. This model is supported by the specific solvation effects obsd. in chlorinated and arom. solvents and by variable-temp. NMR spectra data.

ST ***squaraine*** NMR solvent effect; solvation ***squaraine*** ;
 conformation ***squaraine***
 IT Conformation and Conformers
 Nuclear magnetic resonance
 (of ***squaraine*** derivs.)
 IT Solvation
 (of ***squaraine*** derivs., NMR in relation to)
 IT Solvent effect
 (on NMR spectra of ***squaraine*** derivs.)
 IT 2826-28-0 121289-35-8 121289-36-9 121289-37-0 121314-06-5
 RL: PRP (Properties)
 (NMR spectrum of, solvent effect on)

L4 ANSWER 26 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1987:616972 CAPLUS <<LOGINID::20060727>>
 DN 107:216972
 ED Entered STN: 12 Dec 1987
 TI ***Squaraine*** chemistry: effects of structural changes on the
 absorption and multiple fluorescence emission of bis[4-
 (dimethylamino)phenyl] ***squaraine*** and its derivatives
 AU Law, Kock Yee
 CS Xerox Corp., Webster, NY, 14580, USA
 SO Journal of Physical Chemistry (1987), 91(20), 5184-93
 CODEN: JPCHAX; ISSN: 0022-3654
 DT Journal
 LA English
 CC 22-9 (Physical Organic Chemistry)
 Section cross-reference(s): 74
 GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The UV and steady state fluorescence of the donor-acceptor-donor (D-A-D) bis[4-(dimethylamino)phenyl] ***squaraine*** (I; R = Me, R1 = H), I (R = Et, Pr, Bu, C18H37; R1 = H, Me, MeO, OH, F, Et), or the analogs II, III, or IV were examd. All substituents on I (R = R1 = H) exert bathochromic effects in soln. which originate from solute-solvent ***complexes*** whose formation constns. increase with the D-A-D charge transfer character of I. I have strong red absorptions in soln. and are panchromatic in the solid. Temp. and solvent effects, in ***mixed*** solvent systems, on the fluorescence show that the obsd. multiple emission bands (identified from their stokes shifts) arise from 3 excited states: the free singlet state, the solvent ***complexed*** singlet state, and a twisted excited singlet state which is formed, in the radiationless decay (via rotational relaxation), from the other 2 singlets.
 ST UV ***squaraine*** substituent effect; fluorescence ***squaraine***

solvent effect; methylaminophenylsquaraine

IT Conformation and Conformers
(of bis(dialkylaminophenyl) ***squaraines*** in excited states)

IT Fluorescence
Ultraviolet and visible spectra
(of ***squaraines***, solvent effects on)

IT Substituent effect
(on UV and fluorescence of ***squaraines***)

IT Energy level excitation
(charge-transfer, of bis(dialkylaminophenyl) ***squaraines***)

IT Energy level excitation
Energy level transition
(electronic, of bis(dialkylaminophenyl) ***squaraines***)

IT Charge-transfer ***complexes***
RL: PRP (Properties)
(intramol., of bis(dialkylaminophenyl) ***squaraines***)

IT Energy level transition
(nonradiative, of bis(dialkylaminophenyl) ***squaraines***)

IT 43134-09-4 63842-82-0 63842-83-1 68842-56-8 68842-66-0
72907-70-1 82930-30-1 87286-91-7 98125-61-2 99663-97-5
102128-66-5 105810-36-4 105810-37-5 105810-38-6 105810-39-7
105856-84-6 109976-92-3 109976-93-4 109976-95-6
RL: PRP (Properties)
(fluorescence and UV of, solvent effects on)

L4 ANSWER 27 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1986:543552 CAPLUS <<LOGINID::20060727>>

DN 105:143552

ED Entered STN: 18 Oct 1986

TI ***Squarylium*** dyes

IN Niigae, Ryuichi; Murakami, Yoshinobu; Hisada, Hitoshi

PA Matsushita Electric Industrial Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C09B057-00

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)
Section cross-reference(s): 41

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 61073770	A2	19860415	JP 1984-196033	19840919
	JP 05048262	B4	19930721		
PRAI	JP 1984-196033		19840919		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 61073770	ICM	C09B057-00
	IPCI	C09B0057-00 [ICM,4]
	IPCR	C09B0057-00 [I,A]; C09B0057-00 [I,C*]

OS CASREACT 105:143552

GI

/ Structure 8 in file .gra /

AB ***Squarylium*** dyes of the formula I (R = H, C.ltoreq.4 alkyl),
useful as charge carrier-generating substances in electrophotog.
photoreceptors, are obtained by reacting II (R = H, C.ltoreq.4 alkyl) with
3,4-dihydroxy-3-cyclobutene-1,2-dione (III) in the presence of
polyphosphoric acid. Thus, polyphosphoric acid 180, III 1.1, and
N-ethylcarbazole 2.9 g were ***mixed*** and stirred to obtain 1.5 g I
(R = Et), 1 part of which ***mixed*** with 1 part Eslec BH-1
[poly(vinyl butyral)] and 32 parts iso-PrOH to obtain a dispersion. This
dispersion was coated on a Metalumy (***Al*** -evapd. PET) film and
dried at 80.degree. for 1 h to form a 0.5-.mu.-thick charge
carrier-generating layer, which was over-coated with a soln. contg. I (R =

Et) 1, Panlite K 1300 1, and THF 10 parts and dried at 100.degree. for 1 h to form a 10-.mu.-thick charge carrier-transport layer. The resulting electrophotog. material, when used in an electrostatic copier, showed a high sensitivity.

ST ***squarylium*** dye charge generator electrophotog; ethylcarbazole hydroxycyclobutenedione ***squarylium*** dye; electrophotog photoconductor charge generating dye

IT Polyphosphoric acids
RL: PREP (Preparation)
(***squarylium*** dye prepn. in presence of)

IT Photography, electro-, photoconductors
Photography, electro-, plates
(with charge carrier-generating layer from ***squarylium*** dye)

IT 104446-17-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and use of, as charge carrier-generator in electrophotog. photoreceptor)

IT 86-28-2 2892-51-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of)

L4 ANSWER 28 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1986:432930 CAPLUS <<LOGINID::20060727>>
DN 105:32930
ED Entered STN: 26 Jul 1986
TI Electrophotographic photosensitive materials
IN Kin, Ishi; Tanaka, Hiroyuki; Fu, Ryujun
PA Fuji Xerox Co., Ltd., Japan
SO Jpn. Kokai Tokyo Koho, 4 pp.

CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03G005-06
ICS G03G005-04

ICA H01L031-08
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60258550	A2	19851220	JP 1984-92762	19840511
	JP 03042660	B4	19910627		
PRAI	JP 1984-92762		19840511		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 60258550	ICM	G03G005-06
	ICS	G03G005-04
	ICA	H01L031-08
	IPCI	G03G0005-06 [ICM,4]; G03G0005-04 [ICS,4]; H01L0031-08 [ICA,4]
	IPCR	G03G0005-06 [I,A]; G03G0005-06 [I,C*]

GI

/ Structure 9 in file .gra /

AB The photosensitive layers of the title materials contain I (R = C2-6 linear alkyl). The materials show high sensitivity. Thus, I (R = Et) was dispersed together with CH2Cl2 and steel balls for 12 h, ***mixed*** with Vylon 200 (polyester), coated on an ***Al*** plate to form a 0.5-.mu. charge-generating layer, and overcoatyed with Panlite (polycarbonate) contg. 50% 1-phenyl-3-(p-diethylaminostyryl)-5-(p-diethylaminophenyl)pyrazoline to form a 15-.mu. charge-transfer layer. The resulting material was corona charged (-6 kV; 2 s), kept in the dark for 2 s, and irradiated with a W lamp at 10 lx, showing initial surface voltage 850 V and E1/2 (voltage-halving exposure) 1.5 lx-s.

ST electrophotog photoconductor high sensitivity; ***squarylium*** compd electrophotog sensitive material

IT Photography, electro-, photoconductors
(contg. ***squarylium*** compd. with improved sensitivity)

IT 102128-67-6 102149-21-3 102773-56-8 102792-69-8
 RL: USES (Uses)
 (electrophotog. photosensitive material contg., for improved sensitivity)

L4 ANSWER 29 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1986:234271 CAPLUS <<LOGINID::20060727>>
 DN 104:234271
 ED Entered STN: 27 Jun 1986
 TI Electrophotographic organic photosensitive materials
 IN Tanaka, Hiroyuki; Kin, Ishi; Saeki, Satoru; Fu, Ryujun; Torigoe, Kaoru
 PA Fuji Xerox Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JKXXAF

DT Patent
 LA Japanese
 IC ICM G03G005-04
 ICS H01L031-08

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	JP 60258547	A2	19851220	JP 1984-104780	19840525
	JP 02054940	B4	19901126		
PRAI	JP 1984-104780		19840525		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
-----	----	-----
JP 60258547	ICM	G03G005-04
	ICS	H01L031-08
	IPCI	G03G0005-04 [ICM,4]; H01L0031-08 [ICS,4]
	IPCR	G03G0005-06 [I,A]; G03G0005-06 [I,C*]

GI

/ Structure 10 in file .gra /

AB The title materials contain a conductive support laminated with org. photosensitive layers comprising a charge-generating layer contg. I (R = halo, Me, MeO, NO2, CN, CO2H, ethoxycarbonyl; R1 = H, OH, Me; n = 0-5) and a charge-transfer layer contg. II (R2 = Me, Cl). The materials show high sensitivity. Thus, 3,4-dihydroxy-3-cyclobutene-1,2-dione0.76, N-benzyl-N-methylaniline 2.48 g, and BuOH 26.8 mL were ***mixed*** and stirred at 110.degree. for 4 h to obtain I (R1 = H; n = 0), 1 part of which was ***mixed*** with Polyester 49000 1 and CH2Cl2 10 parts, pulverized in a ball mill for 4 h, coated on an ***Al*** -evapd. polyester film (Metalmy), and dried at 70.degree. for 5 h to form a 1-.mu.-thick charge-generating layer. On this layer, a soln. contg. N, N'-diphenyl-N, N'-bis(3-methylphenyl)-[1,1'-diphenyl]-4,4'-diamine 1, Panlite 1, and CH2Cl2 10 parts was coated and dried at 70.degree. for 16 h to form a 22-.mu.-thick charge-transfer layer. The resulting material was corona-charged (-6 kV) and irradiated with a W lamp at 10 lx, showing initial voltage -1150 V, voltage after standing in the dark for 2 s -1140 V, E1/2 (voltage-halving exposure) 2.1 l-s, and residual voltage 0 V.

ST electrophotog org photosensitive material; ***squarylium*** compd electrophotog photoconductor; diphenyldiamine deriv electrophotog photosensitive material

IT Photography, electro-, photoconductors
 (with charge-generating layer contg. ***squarylium*** compd. with improved performance)

IT 614-30-2 2892-51-5 101462-78-6
 RL: USES (Uses)
 (electrophotog. org. photosensitive material with charge-generating layer contg., with improved performance)

IT 101462-70-8 101462-73-1 101462-79-7 101462-80-0 102128-62-1
 102128-63-2 102395-00-6 102395-01-7
 RL: USES (Uses)
 (electrophotog. photoconductor with charge-generating layer contg.)

IT 65181-78-4
 RL: USES (Uses)

(electrophotog. photoconductor with charge-generating layer contg.
saquarylium compd. and charge-transfer layer contg.)

L4 ANSWER 30 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1986:216488 CAPLUS <<LOGINID::20060727>>
DN 104:216488
ED Entered STN: 14 Jun 1986
TI Electrophotographic organic sensitive materials
IN Kin, Ishi; Tanaka, Hiroyuki; Saeki, Satoru; Torigoe, Kaoru; Fu, Ryujun
PA Fuji Xerox Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03G005-04
ICA H01L031-08
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60258548	A2	19851220	JP 1984-104782	19840525
	JP 02054942	B4	19901126		
PRAI	JP 1984-104782		19840525		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 60258548	ICM	G03G005-04
	ICA	H01L031-08
	IPCI	G03G0005-04 [ICM,4]; H01L0031-08 [ICA,4]
	IPCR	G03G0005-06 [I,A]; G03G0005-06 [I,C*]

GI

/ Structure 11 in file .gra /

AB The electrophotog. materials include charge-generating layers contg. I (R = halo, Me, MeO, NO₂, CN, CO₂H, ethoxycarbonyl; n = 0-5; R₁ = H, OH, Me) and charge-transport layers contg. R₃NR₄-p-C₆H₄CH:N₂Ph (II; R₂ = Me, Ph, benzyl; R₃, R₄ = Me, Et). Thus, 0.76 g 3,4-dihydroxy-3-cyclobutene-1,2-dione, 2.48 g N-benzyl-N-methylaniline, and 26.8 mL BuOH were
mixed and stirred at 110.degree. for 4 h to obtain I (n = 0; R₁ = H), 1 part of which was ***mixed*** with 1 part Polyester 49000 and 10 parts THF, pulverized in a ball mill for 4 h, coated on a ***Al***-evapd. polyester film (Metalmy), dried at 70.degree. for 5 h to form a 1- μ -thick charge-generating layer. On this layer, a soln. contg. II (R₂ = Ph; R₃, R₄ = Me) 1, Panlite 1, and THF 10 parts was coated, and dried at 70.degree. for 16 h to form a 22- μ -thick photosensitive material with a charge-transport layer. The resulting material was corona charged (-6 kV; 2 s) and irradiated with a W lamp at 10 lx, and showed initial voltage -1180 V, voltage after standing in the dark for 2 s -1140 V, E_{1/2} (voltage-halving exposure) 1.9 lx-s, and residual voltage (after 10 s irradiation) 0 V.

ST electrophotog photoconductor hydrazone ***squarylium*** dye;
squarylium dye electrophotog photoreceptor; hydrazone compd
electrophotog photoreceptor
IT Photography, electro-, photoconductors
(multilayer, with charge-generating layer contg. ***squarylium***
dye and charge-transport layer contg. hydrazone deriv.)

IT 59670-38-1 71135-02-9
RL: USES (Uses)
(electrophotog. photoconductor with charge-generating layer contg.
squarylium dye and charge-transport layer contg.)
IT 101462-67-3 101462-68-4 101462-73-1 101462-78-6 101462-79-7
101462-80-0 101539-83-7 102128-63-2
RL: USES (Uses)
(electrophotog. photoconductor with charge-generating layer contg., and
charge-transport layer contg. hydrazone deriv.)

L4 ANSWER 31 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1986:216487 CAPLUS <<LOGINID::20060727>>

DN 104:216487
 ED Entered STN: 14 Jun 1986
 TI Electrophotographic sensitive materials
 IN Kin, Ishi; Tanaka, Hiroyuki; Fu, Ryujun
 PA Fuji Xerox Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 4 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM G03G005-06
 ICS G03G005-04
 ICA H01L031-08
 CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60258551	A2	19851220	JP 1984-92763	19840511
	JP 03042661	B4	19910627		
PRAI	JP 1984-92763		19840511		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 60258551	ICM	G03G005-06
	ICS	G03G005-04
	ICA	H01L031-08
	IPCI	G03G0005-06 [ICM,4]; G03G0005-04 [ICS,4]; H01L0031-08 [ICA,4]
	IPCR	G03G0005-06 [I,A]; G03G0005-06 [I,C*]; G03G0005-07 [I,A]; G03G0005-07 [I,C*]

GI

/ Structure 12 in file .gra /

AB The electrophotog. materials have photosensitive layers contg. I (R = C2-6 linear alkyl). The materials show high sensitivity. Thus, I (R = Et) was pulverized together with CH2Cl2 and steel balls for 12 h, ***mixed*** with Vylon 200, and coated on an ***Al*** plate by .apprx.0.5 .mu. to form a charge-generating layer, on which Panlite contg. 50% 1-phenyl-3-(p-diethylaminostyryl)-5-(p-diethylaminophenyl)-pyrazoline was coated by .apprx.15 .mu. to form a charge-transport layer. The resulting material was corona charged (-6 kV; 2 s), kept in the dark for 2 s, and irradiated with a W lamp at 10 lx, showing initial surface voltage 820 V and E1/2 (voltage-halving exposure) 3.2 lx-s.

ST ***squarylium*** dye electrophotog photoconductor
 IT Photography, electro-, photoconductors
 (***squarylium*** dyes as charge-generating agents for)
 IT 102128-65-4 102128-66-5 102149-19-9 102149-20-2
 RL: USES (Uses)
 (electrophotog. photoconductor with charge-generating layer contg.)
 IT 53332-49-3
 RL: USES (Uses)
 (electrophotog. photoconductor with charge-transport layer contg., and charge-generating layer contg. ***squarylium*** dye)

L4 ANSWER 32 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1986:216486 CAPLUS <<LOGINID::20060727>>
 DN 104:216486
 ED Entered STN: 14 Jun 1986
 TI Electrophotographic sensitive materials
 IN Kin, Ishi; Tanaka, Hiroyuki; Saeki, Satoru; Torigoe, Kaoru; Fu, Ryujun
 PA Fuji Xerox Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM G03G005-06
 ICS G03G005-04
 ICA H01L031-08
 CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other

Reprographic Processes)

FAN.CNT 2					
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60258552	A2	19851220	JP 1984-92764	19840511
	JP 03042662	B4	19910627		
	US 4626485	A	19861202	US 1985-733165	19850513
PRAI	JP 1984-92764	A	19840511		
	JP 1984-104776	A	19840525		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 60258552	ICM	G03G005-06
	ICS	G03G005-04
	ICA	H01L031-08
	IPCI	G03G0005-06 [ICM,4]; G03G0005-04 [ICS,4]; H01L0031-08 [ICA,4]
US 4626485	IPCR	G03G0005-06 [I,A]; G03G0005-06 [I,C*]
	IPCI	G03G0005-06 [ICM,4]; G03G0005-14 [ICS,4]
	IPCR	G03G0005-06 [I,A]; G03G0005-06 [I,C*]
	NCL	430/058.250; 430/058.300; 430/058.500; 430/058.550; 430/058.800; 430/073.000; 564/307.000

GI

/ Structure 13 in file .gra /

AB The electrophotog. materials have photosensitive layers contg. I (R = H, F, Cl, Br, NO2, CN). The materials show high sensitivity. Thus I (R = H) was pulverized together with CH2Cl2 and steel balls for 12 h, ***mixed*** with Vylon 200, and coated on an ***Al*** plate by .apprx.0.5 .mu. to form a charge-generating layer, on which Panlite contg. 50% 1-phenyl-3-(p-diethylaminostyryl)-5-(p-diethylaminophenyl)-pyrazoline was coated by .apprx.15 .mu. to form a charge-transport layer. The resulting material was corona charged (.apprx.6 kV; 2 s), kept in the dark for 2 s, and irradiated with a W lamp at 10 lx, and showed initial surface voltage 820 V and E1/2 (voltage-halving exposure) 2.2 lx-s.

ST ***squarylium*** dye electrophotog photoconductor
 IT Photography, electro-, photoconductors
 (multilayer, ***squarylium*** dyes charge-generating agents for)
 IT 101462-72-0 101462-73-1 101526-45-8 102128-63-2 102128-64-3
 102149-18-8
 RL: TEM (Technical or engineered material use); USES (Uses)
 (electrophotog. charge-generating agent)
 IT 53332-49-3
 RL: USES (Uses)
 (electrophotog. photoreceptor with charge-transport layer contg.,
 squarylium dyes as charge-generating agents for)

L4 ANSWER 33 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1986:216485 CAPLUS <<LOGINID::20060727>>
 DN 104:216485
 ED Entered STN: 14 Jun 1986
 TI Electrophotographic sensitive materials
 IN Kin, Ishi; Tanaka, Hiroyuki; Saeki, Satoru; Torigoe, Kaoru; Fu, Ryujun
 PA Fuji Xerox Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM G03G005-06
 ICS G03G005-04
 ICA H01L031-08
 CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 2					
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60258553	A2	19851220	JP 1984-92765	19840511
	US 5055615	A	19911008	US 1988-233101	19880817
PRAI	JP 1984-92765	A	19840511		

JP 1984-92770 A 19840511
US 1985-733166 B1 19850513
US 1987-26598 B3 19870317

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 60258553	ICM	G03G005-06
	ICS	G03G005-04
	ICA	H01L031-08
	IPCI	G03G0005-06 [ICM,4]; G03G0005-04 [ICS,4]; H01L0031-08 [ICA,4]
	IPCR	G03G0005-06 [I,A]; G03G0005-06 [I,C*]
US 5055615	IPCI	C07C0085-00 [ICM,4]
	IPCR	C07C0211-00 [I,C*]; C07C0211-50 [I,A]; C07C0229-00 [I,C*]; C07C0229-42 [I,A]; C07C0255-00 [I,C*]; C07C0255-58 [I,A]; G03G0005-06 [I,A]; G03G0005-06 [I,C*]
	NCL	564/307.000; 430/074.000; 558/416.000; 558/418.000; 558/419.000; 560/045.000; 562/457.000

GI

/ Structure 14 in file .gra /

AB The electrophotog. materials have photosensitive layers contg. I (R = NO₂, CN). The materials show high sensitivity. Thus, I (R = NO₂) was pulverized together with CH₂Cl₂ and steel balls for 12 h, ***mixed*** with Vylon 200, and coated on an ***Al*** plate by .apprx.0.5 .mu. to form a charge-generating layer, on which Panlite contg. 50% 1-phenyl-3-(p-diethylaminostyryl)-5-(p-diethylaminophenyl)-pyrazoline was coated by .apprx.15 .mu. to form a charge-transport layer. The resulting material was corona charged (-6 kV; 2 s), kept in the dark for 2 s, and irradiated with a W lamp at 10 lx, and showed initial surface voltage 850 V and E1/2 (voltage-halving exposure) 1.5 lx-s.

ST ***squarylium*** dye electrophotog photoconductor

IT Photography, electro-, photoconductors

(multilayer, with ***squarylium*** dye in charge-generating layer)

IT 102128-61-0 102128-62-1

RL: USES (Uses)

(electrophotog. photoconductor with charge-generating layer contg.)

IT 53332-49-3

RL: USES (Uses)

(electrophotog. photoconductor with charge-transport layer contg., and charge-generating layer contg. ***squarylium*** dye)

L4 ANSWER 34 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1986:216484 CAPLUS <<LOGINID::20060727>>

DN 104:216484

ED Entered STN: 14 Jun 1986

TI Electrophotographic sensitive materials

IN Tanaka, Hiroyuki; Kin, Ishi; Fu, Ryujuun; Kimura, Shiro

PA Fuji Xerox Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03G005-06

ICS G03G005-04

ICA H01L031-08

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60258554	A2	19851220	JP 1984-92766	19840511
PRAI	JP 1984-92766		19840511		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 60258554	ICM	G03G005-06
	ICS	G03G005-04

ICA H01L031-08
IPCI G03G0005-06 [ICM,4]; G03G0005-04 [ICS,4]; H01L0031-08
[ICA,4]
IPCR G03G0005-06 [I,A]; G03G0005-06 [I,C*]

GI

/ Structure 15 in file .gra /

AB The electrophotog. materials have photosensitive layers contg. I (R = NHCOMe, NHSO2Me). The materials show high sensitivity. Thus, I (R = NHCOMe) was pulverized together with CH2Cl2 and steel balls for 12 h, ***mixed*** with Vylon 200 (polyester) and coated on an ***Al*** plate by .apprx.0.5 .mu. to form a charge-generating layer, on which Panlite contg. 50% 1-phenyl-3-(p-diethylaminostyryl)-5-(p-diethylaminophenyl)-pyrazoline was coated by .apprx.15 .mu. to form a charge-transport layer. The resulting material was corona charged (-6 kV; 2 s), kept in the dark for 2 s, and irradiated with a W lamp at 10 lx, and showed initial surface voltage 720 V and E1/2 (voltage-halving exposure) 4.3 lx-s.

ST electrophotog photoconductor ***squarylium*** dye

IT Photography, electro-, photoconductors
(multilayer, with charge-generating layer contg. ***squarylium*** dye)

IT 57609-72-0

RL: USES (Uses)

(electrophotog. photoconductor with charge-transport layer contg., and charge-generating layer contg. ***squarylium*** dye)

IT 102305-12-4

RL: USES (Uses)

(electrophotog. photoconductor with charge-transport layer from, and charge-generating layer contg. ***squarylium*** dye)

IT 102305-11-3

RL: USES (Uses)

(electrophotog. photoreceptor with charge-generating layer contg.)

L4 ANSWER 35 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1986:216483 CAPLUS <<LOGINID::20060727>>

DN 104:216483

ED Entered STN: 14 Jun 1986

TI Electrophotographic photosensitive materials

IN Tanaka, Hiroyuki; Kin, Ishi; Fu, Ryuji; Kimura, Shiro

PA Fuji Xerox Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03G005-06

ICS G03G005-04

ICA H01L031-08

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60258555	A2	19851220	JP 1984-92767	19840511
PRAI	JP 1984-92767		19840511		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 60258555	ICM	G03G005-06
	ICS	G03G005-04
	ICA	H01L031-08
	IPCI	G03G0005-06 [ICM,4]; G03G0005-04 [ICS,4]; H01L0031-08 [ICA,4]
	IPCR	G03G0005-06 [I,A]; G03G0005-06 [I,C*]

GI

AB The title materials contain a photosensitive layer contg. I (R = OH, OMe). The materials show high sensitivity. Thus, I (R = OH) was pulverized together with CH₂Cl₂ and steel balls for 12 h, ***mixed*** with Vylon 200 (polyester), coated on an ***Al*** plate to .apprx.0.5 .mu. to form a charge-generating layer, and overcoated with Panlite (polycarbonate) contg. 50% 1-phenyl-3-(p-diethylaminostyryl)-5-(p-diethylaminophenyl)-pyrazoline to .apprx.15 .mu. to form a charge-transfer layer. The resulting material was corona charged (-6 kV; 2 s), kept in the dark for 2 s, and irradiated with a W lamp at 10 lx, showing initial surface voltage 740 V and E1/2 (voltage-halving exposure) 4.8 lx-s.

ST electrophotog photosensitive materials; ***squarylium*** compd
electrophotog photoconductor

IT Photography, electro-, photoconductors
(with charge-generating layer contg. ***squarylium*** compd., with improved sensitivity)

IT 102395-02-8 102395-03-9
RL: USES (Uses)
(electrophotog. photoconductor with charge-generating layer contg., for improved sensitivity)

L4 ANSWER 36 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1986:177645 CAPLUS <<LOGINID::20060727>>
DN 104:177645
ED Entered STN: 17 May 1986
TI ***Squarylium*** compound and photoreceptor containing it
IN Tanaka, Hiroyuki; Kin, Seki; Lyong, Sun Pu
PA Fuji Xerox Co., Ltd., Japan
SO Eur. Pat. Appl., 35 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM C07C119-06
ICS G03G005-06
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	EP 146123	A2	19850626	EP 1984-115344	19841213
	EP 146123	A3	19860514		
	EP 146123	B1	19870909		
	R: DE, FR, GB				
	JP 60128452	A2	19850709	JP 1983-236204	19831216
	JP 03049427	B4	19910729		
	JP 60128453	A2	19850709	JP 1983-236205	19831216
	JP 03049428	B4	19910729		
	JP 60130558	A2	19850712	JP 1983-236203	19831216
	JP 03048948	B4	19910726		
	US 4908289	A	19900313	US 1986-942922	19861217
	US 4752650	A	19880621	US 1987-91340	19870831
PRAI	JP 1983-236203	A	19831216		
	JP 1983-236204	A	19831216		
	JP 1983-236205	A	19831216		
	US 1984-682203	B3	19841217		
	US 1985-744590	B1	19850614		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
-----	----	-----
EP 146123	ICM	C07C119-06
	ICS	G03G005-06
	IPCI	C07C0119-06 [ICM,4]; G03G0005-06 [ICS,4]
	IPCR	G03G0005-06 [I,A]; G03G0005-06 [I,C*]
JP 60128452	IPCI	G03G0005-06 [ICM,4]; H01L0031-08 [ICA,4]
	IPCR	G03G0005-06 [I,A]; G03G0005-06 [I,C*]
JP 60128453	IPCI	G03G0005-06 [ICM,4]; C07C0119-06 [ICA,4]; H01L0031-08 [ICA,4]
	IPCR	G03G0005-06 [I,A]; G03G0005-06 [I,C*]
JP 60130558	IPCI	C07C0119-06 [ICM,4]; G03G0005-06 [ICA,4]; H01L0031-08 [ICA,4]

IPCR G03G0005-06 [I,A]; G03G0005-06 [I,C*]; H01L0031-08
 [I,A]; H01L0031-08 [I,C*]
 US 4908289 IPCI G03G0005-14 [ICM,4]; G03G0005-06 [ICS,4]
 IPCR G03G0005-06 [I,A]; G03G0005-06 [I,C*]
 NCL 430/058.250; 430/058.300; 430/058.500; 430/058.550;
 430/058.800; 430/073.000; 564/307.000
 US 4752650 IPCI C07C0085-00 [ICM,4]; C07C0085-02 [ICS,4]; C07C0085-06
 [ICS,4]
 IPCR G03G0005-06 [I,A]; G03G0005-06 [I,C*]
 NCL 564/307.000
 OS CASREACT 104:177645
 GI

/ Structure 17 in file .gra /

AB The charge-generating layer of an electrophotog. photoreceptor contains a
 squarylium compd. represented by formula I or II (R = H, OH, Cl-6
 alkyl, Cl-4 alkoxy, halo; R1 = H, OH, Cl-4 alkyl, Cl-4 alkoxy). The
 photoreceptor thus produced is highly sensitive and mech. strong. The
 spectral sensitivity curve of the photoreceptor is substantially flat
 extending from the visible to near IR region. Thus, 3,4-dihydroxy-3-
 cyclobutene-1,2-dione 0.76 and N-(p-chlorophenylmethyl)-N-methylaniline
 2.48 g were added to BuOH 26.8 mL and heated at 130-140.degree. for 4 h
 under agitation to give I (R = Cl; R1 = H) (III). III 10 g was ground in
 a ball mill in CH2Cl2 160 mL, ***mixed*** with a polyester resin
 (Vylon 200), coated on an ***Al*** plate, dried to give a
 charge-generating layer (0.5 .mu.), overcoated with a 50:50 mixt. of
 1-phenyl-3-(p-diethylamino styryl)-5-(p-diethylaminophenyl)pyrazoline and
 a polycarbonate resin (panlite) to give a charge-transporting layer,
 charged by a 6 kV corona discharge, left in dark for 2 s to give a surface
 potential of 800 V, and exposed to a W halide lamp (10 lx) until the
 surface potential reduced to 1/2. An exposure of 1.9 lx-s was required
 for such a potential redn.

ST ***squarylium*** compd charge generator electrophotog; photoconductor
 electrophotog charge generating layer

IT Photography, electro-, photoconductors
 Photography, electro-, plates

IT (charge-generating layer contg. ***squarylium*** compd. for)
 101462-69-5 101462-72-0 101462-73-1 101462-74-2 101462-75-3
 101462-76-4 101462-77-5 101462-78-6 101462-79-7 101462-80-0
 101462-81-1 101483-56-1 101483-57-2

RL: USES (Uses)

(charge-generating layer contg., for electrophotog. plates)

IT 129-79-3 519-73-3 11120-54-0 15546-43-7 25067-59-8 37372-26-2
 51134-09-9 53332-49-3 94927-42-1 101482-87-5

RL: USES (Uses)

(charge-transporting layer contg., for electrophotog. plates contg.

charge-generating layer contg. ***squarylium*** compd.)

IT 614-30-2 16547-09-4 16547-11-8 101663-45-0

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with dihydroxycyclobutenedione in prepn. of

squarylium compd. charge-generating agents for electrophotog.
 plates)

IT 2892-51-5

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with N-methyl-N-phenylaniline derivs. in prepn. of

squarylium compd. charge-generating agents for electrophotog.
 plates)

L4 ANSWER 37 OF 37 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1985:87593 CAPLUS <<LOGINID::20060727>>

DN 102:87593

ED Entered STN: 09 Mar 1985

TI Electrophotographic photoreceptor

PA Fuji Xerox Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC G03G0005-06; G03G0005-04

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 59125735	A2	19840720	JP 1983-455	19830107
	JP 02031379	B4	19900712		
PRAI	JP 1983-455		19830107		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 59125735	IC	G03G0005-06; G03G0005-04
	IPCI	G03G0005-06; G03G0005-04

GI

/ Structure 18 in file .gra /

AB The claimed photoreceptor has a photosensitive layer contg. a
squarylium dye having the general formula I (R = C2-6 linear
alkyl, cyclic alkyl, Ph, substituted Ph). The photoreceptor has high
sensitivity in the visible to near-IR spectral region. Thus, I (R = Et)
30 was pulverized and ***mixed*** with a polyester resin (Vylon 200;
Toyobo Co. Ltd) 100 wt. parts and then coated on an ***Al*** plate to
form a charge carrier-generating layer. A charge carrier-transport layer
contg. 1-phenyl-3-(p-diethylaminostyryl)-5-(p-
diethylaminophenyl)pyrazoline and a carbonate resin (Panlite; Teijin Chem.
Ltd.) was further coated thereon. The photoreceptor when charged to 760 V
showed a sensitivity (lx-s for half voltage decay) of 1.6.

ST photoreceptor electrophotog charge generator ***squarylium*** ;
cyclobutane deriv charge generator electrophotog

IT Photography, electro-, photoconductors
Photography, electro-, plates
(composite, with ***squarylium*** dye deriv.-contg. charge
carrier-generating layer)

IT Polyesters, uses and miscellaneous
RL: USES (Uses)
(electrophotog. photoreceptor with charge carrier-generating layer
contg.)

IT 37337-82-9 94750-64-8 94750-65-9 94750-66-0 94750-67-1
94750-68-2 94750-69-3
RL: USES (Uses)
(electrophotog. photoreceptor with charge carrier-generating layer
contg.)

=> d his

(FILE 'HOME' ENTERED AT 15:41:57 ON 27 JUL 2006)

FILE 'CAPLUS' ENTERED AT 15:42:04 ON 27 JUL 2006

L1 1127 S (SQUARINE OR SQUARINE OR SQUARILUM OR SQUARYLIUM)
L2 4302206 S (LIGAND OR CHELAT? OR COMPLEX? OR METAL OR METALLIZED OR ALUM
L3 232 S L1 AND L2
L4 37 S (MIXED OR DIFFERENT OR COMPLEX(3A)SALT) AND L3

=> s (optical or laser or information) and l3

893784 OPTICAL
20 OPTICALS
893792 OPTICAL
(OPTICAL OR OPTICALS)
528870 LASER
163425 LASERS
542447 LASER
(LASER OR LASERS)
413093 INFORMATION
3073 INFORMATIONS
415542 INFORMATION
(INFORMATION OR INFORMATIONS)
L5 73 (OPTICAL OR LASER OR INFORMATION) AND L3

=> s 15 not 14
L6 63 L5 NOT L4

=> d all 1-63

L6 ANSWER 1 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2006:558614 CAPLUS <<LOGINID::20060727>>
DN 145:73436
ED Entered STN: 15 Jun 2006
TI ***Optical*** recording medium containing ***squarylium***
metal salts
IN Yoneda, Mayumi; Shinkai, Masahiro
PA TDK Corporation, Japan
SO Jpn. Kokai Tokkyo Koho, 17 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2006150856	A2	20060615	JP 2004-347531	20041130
PRAI	JP 2004-347531		20041130		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2006150856	IPCI	B41M0005-26 [I,A]; G11B0007-244 [I,A]; G11B0007-24 [I,C*] FTerm 2H111/EA03; 2H111/EA12; 2H111/EA22; 2H111/EA25; 2H111/EA32; 2H111/EA44; 2H111/FB42; 5D029/JA04

AB The invention is concerned about an ***optical*** recording medium,
such as disk, characterized by contg. ***squarylium*** ***metal***
salts in the recording layer.

ST ***optical*** recording medium ***squarylium*** salt

IT ***Optical*** recording materials
(***optical*** recording medium contg. ***squarylium***
metal salts for disks)

IT Onium compounds

RL: MOA (Modifier or additive use); USES (Uses)

(***squarylium*** ; ***optical*** recording medium contg.
squarylium ***metal*** salts for disks)

IT 478629-01-5 890659-43-5 890659-44-6

RL: MOA (Modifier or additive use); USES (Uses)

(***optical*** recording medium contg. ***squarylium***
metal salts for disks)

L6 ANSWER 2 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2006:378668 CAPLUS <<LOGINID::20060727>>

DN 145:58620

ED Entered STN: 26 Apr 2006

TI Protein labeling with red ***squarylium*** dyes for analysis by
capillary electrophoresis with ***laser*** -induced fluorescence
detection

AU Yan, Weiying; Sloat, Amy L.; Yagi, Shigeyuki; Nakazumi, Hiroyuki; Colyer,
Christa L.

CS Department of Chemistry, Wake Forest University, Winston-Salem, NC, USA

SO Electrophoresis (2006), 27(7), 1347-1354

CODEN: ELCTDN; ISSN: 0173-0835

PB Wiley-VCH Verlag GmbH & Co. KGaA

DT Journal

LA English

CC 9-7 (Biochemical Methods)

AB Two new red luminescent asym. ***squarylium*** dyes (designated
"Red-1c and Red-3") have been shown to exhibit absorbance shifts to longer
wavelengths upon the addn. of protein, along with a concomitant increase
in fluorescence emission. Specifically, the absorbance maxima for Red-1c
and Red-3 dyes are 607 and 622 nm, resp., in the absence of HSA, and 642
and 640 nm in the presence of HSA, making the excitation of their protein
complexes feasible with inexpensive and robust diode
lasers. Fluorescence emission maxima, in the presence of HSA, are
656 and 644 nm for Red-1c and Red-3, resp. Because of the inherently low

fluorescence of the dyes in their free state, Red-1c and Red-3 were used as on-column labels (i.e., with the dye incorporated into the sepn. buffer), thus eliminating the need for sample derivatization prior to injection and sepn. A comparison of precolumn and on-column labeling of proteins with these ***squarylium*** dyes revealed higher efficiencies and greater sensitivities for on-column labeling, which, when conducted with a basic, high-salt content buffer, permitted baseline resoln. of a mixt. of five model proteins. LOD for model proteins, such as transferrin, .alpha.-lactalbumin, BSA, and .beta.-lactoglobulin A and B, labeled with these dyes and analyzed by CE with LIF detection (CE-LIF) were dependent upon dye concn. and soln. pH, and are as low as 5 nM for BSA. Satisfactory linear relationships between peak height (or peak area) and protein concn. were obtained by CE-LIF for this on-column labeling method with Red-3 and Red-1c.

ST protein labeling red ***squarylium*** dye capillary electrophoresis
 laser fluorescence

IT Capillary electrophoresis
 Fluorescent indicators
 Human
 Laser fluorometry
 Laser induced fluorescence

Semiconductor ***lasers***
 UV and visible spectra
 (protein labeling with red ***squarylium*** dyes for anal. by
 capillary electrophoresis with ***laser*** -induced fluorescence
 detection)

IT Proteins
 Transferrins
 RL: ANT (Analyte); ANST (Analytical study)
 (protein labeling with red ***squarylium*** dyes for anal. by
 capillary electrophoresis with ***laser*** -induced fluorescence
 detection)

IT Concentration (condition)
 pH
 (protein labeling with red ***squarylium*** dyes for anal. by
 capillary electrophoresis with ***laser*** -induced fluorescence
 detection in relation to)

IT Albumins, analysis
 RL: ANT (Analyte); ANST (Analytical study)
 (serum; protein labeling with red ***squarylium*** dyes for anal.
 by capillary electrophoresis with ***laser*** -induced fluorescence
 detection)

IT Lactalbumins
 RL: ANT (Analyte); ANST (Analytical study)
 (.alpha.-; protein labeling with red ***squarylium*** dyes for
 anal. by capillary electrophoresis with ***laser*** -induced
 fluorescence detection)

IT Lactoglobulins
 RL: ANT (Analyte); ANST (Analytical study)
 (.beta.-, A; protein labeling with red ***squarylium*** dyes for
 anal. by capillary electrophoresis with ***laser*** -induced
 fluorescence detection)

IT Lactoglobulins
 RL: ANT (Analyte); ANST (Analytical study)
 (.beta.-, B; protein labeling with red ***squarylium*** dyes for
 anal. by capillary electrophoresis with ***laser*** -induced
 fluorescence detection)

IT 7447-40-7, Potassium chloride, analysis
 RL: ANT (Analyte); ANST (Analytical study)
 (additive; protein labeling with red ***squarylium*** dyes for
 anal. by capillary electrophoresis with ***laser*** -induced
 fluorescence detection in relation to)

IT 890935-38-3 890935-39-4
 RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); PRP
 (Properties); ANST (Analytical study); BIOL (Biological study); USES
 (Uses)
 (protein labeling with red ***squarylium*** dyes for anal. by
 capillary electrophoresis with ***laser*** -induced fluorescence
 detection)

RE.CNT 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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L6 ANSWER 3 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2006:343200 CAPLUS <<LOGINID::20060727>>
DN 144:401285
ED Entered STN: 14 Apr 2006
TI Filter for electronic display
IN Yamano, Junzo; Ukai, Katsumi
PA Kyowa Hakko Chemical Co., Ltd., Japan
SO PCT Int. Appl., 25 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 73

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	WO 2006038685	A1	20060413	WO 2005-JP18607	20051007
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
PRAI	JP 2004-295004	A	20041007		

CLASS
PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

WO 2006038685 IPCI C09B0057-00 [I,A]; C07D0231-22 [I,A]; C07D0231-00
[I,C*]; C09B0057-10 [I,A]; G02B0005-22 [I,A];
G09F0009-00 [I,A]
ECLA C09B057/00S

GI

/ Structure 19 in file .gra /

AB A filter for electronic displays which contains a ***squarylium***
compd./ ***metal*** ***complex*** represented by the following
general formula I (R1, R2 = H, alkyl, alkoxy, aralkyl, aryl, heterocyclyl;
R3, R4 = H, alkyl, aralkyl, aryl, heterocyclyl; M = ***metal*** atom
capable of coordinating; n = 1-4). 15 ***Squarylium*** compd./
metal ***complexes*** are synthesized.

ST ***optical*** filter ***squarylium*** compd ***metal***
complex synthesis electronic display

IT ***Optical*** filters
Optical imaging devices
(***squarylium*** compd./ ***metal*** ***complex*** -contg.
filter for electronic display)

IT 882871-78-5P 882871-79-6P 882871-80-9P 882871-82-1P 882871-83-2P
882871-84-3P 882871-85-4P 882871-86-5P 882871-87-6P 882871-88-7P
882871-89-8P 882871-90-1P 882871-91-2P 882871-92-3P 882871-93-4P

RL: DEV (Device component use); SPN (Synthetic preparation); TEM
(Technical or engineered material use); PREP (Preparation); USES (Uses)

(synthesis of ***squarylium*** compd./ ***metal***
complex for electronic display filter)

IT 856006-86-5P 882863-64-1P 882863-65-2P
RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation);
RACT (Reactant or reagent)

(synthesis of ***squarylium*** compd./ ***metal***
complex for electronic display filter)

IT 78-81-9, Isobutylamine 110-89-4, Piperidine, reactions 110-91-8,
Morpholine, reactions 110-96-3, Diisobutylamine 142-71-2, Copper
acetate 6018-89-9, Nickel acetate tetrahydrate 6046-93-1 14024-63-6,
Zinc acetyl acetonate 15306-17-9, Aluminum tris(ethylacetoacetate)
24544-04-5, 2,6-Diisopropylaniline

RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis of ***squarylium*** compd./ ***metal***
complex for electronic display filter)

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Kyowa Hakko Kemikaru Kabushiki Kaisha; WO 2005059608 A1 2005 CAPLUS
- (2) Kyowa Hakko Kogyo Co Ltd; WO 0250190 A 2002 CAPLUS
- (3) Kyowa Hakko Kogyo Co Ltd; EP 1334998 A1 2002 CAPLUS
- (4) Kyowa Hakko Kogyo Co Ltd; US 2003187272 A1 2002 CAPLUS
- (5) Ricoh Co Ltd; EP 1132902 A1 2002 CAPLUS
- (6) Ricoh Co Ltd; JP 2001322356 A 2002 CAPLUS
- (7) Ricoh Co Ltd; US 200144001 A1 2002
- (8) Ricoh Co Ltd; JP 2002234259 A 2002 CAPLUS

L6 ANSWER 4 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2006:267002 CAPLUS <<LOGINID::20060727>>

DN 144:302213

ED Entered STN: 23 Mar 2006

TI Blue color filters having high color reproduction ability and liquid
crystal displays therewith

IN Ishikawa, Hironori; Tsurutani, Yasuyuki; Kawana, Makoto; Terui, Yukiko;
Ozawa, Tetsuo

PA Mitsubishi Chemical Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 39 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

Section cross-reference(s): 41, 73

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2006079012	IPCI	G02B0005-22 [I,A]; G02B0005-20 [I,A]; G02F0001-1335 [I,A]; G02F0001-13 [I,C*]
	FTERM	2H048/BA45; 2H048/BB02; 2H048/BB04; 2H048/BB42; 2H048/CA04; 2H048/CA14; 2H048/CA19; 2H091/FA02; 2H091/FA41Z; 2H091/FB04; 2H091/FB12; 2H091/FC01; 2H091/FC10; 2H091/FC23; 2H091/FC26; 2H091/FD04; 2H091/FD05; 2H091/FD24; 2H091/LA15
AB		The filters, imparting high contrast to LCD, have (A) blue filters wherein blue pigments are dispersed in binder resins and (B) spectral control filters wherein dyes (not pigments) having absorption max. 455-540 nm and half width .ltoreq.50 nm are dispersed in binder resins, and satisfy the blue pigment ratio to all the pigments included .gtoreq.90%. The filters may contain .ltoreq.10% violet pigments. The dyes in B may be pyrazole ***squarylium*** compds., porphyrin compds., and/or dipyrromethene ***metal*** ***chelate*** compds.
ST		blue filter LCD color reprodn improvement; spectral control blue filter LCD contrast; pyrazole ***squarylium*** dye spectral control blue filter
IT		Pigments, nonbiological (blue, in blue filters; high-contrast blue filters having spectral control filter segments contg. sp. nonpigment dyes for LCD)
IT		Heterocyclic compounds RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses) (dipyrromethenes, ***metal*** ***complex***, nonpigment dyes; high-contrast blue filters having spectral control filter segments contg. sp. nonpigment dyes for LCD)
IT		Liquid crystal displays ***Optical*** filters (high-contrast blue filters having spectral control filter segments contg. sp. nonpigment dyes for LCD)
IT		Porphyrins RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses) (nonpigment dyes; high-contrast blue filters having spectral control filter segments contg. sp. nonpigment dyes for LCD)
IT		147-14-8, C.I. Pigment Blue 15:6 215247-95-3, C.I. Pigment Violet 23 RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses) (blue filters; high-contrast blue filters having spectral control filter segments contg. sp. nonpigment dyes for LCD)
IT		288-13-1D, Pyrazole, ***squarylium*** derivs. RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses) (nonpigment dyes; high-contrast blue filters having spectral control filter segments contg. sp. nonpigment dyes for LCD)
IT		9011-14-7, Poly(methyl methacrylate) RL: DEV (Device component use); USES (Uses) (spectral control filters; high-contrast blue filters having spectral control filter segments contg. sp. nonpigment dyes for LCD)
IT		228091-06-3P RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses) (spectral control filters; high-contrast blue filters having spectral control filter segments contg. sp. nonpigment dyes for LCD)
IT		375823-53-3 RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses) (spectral control filters; high-contrast blue filters having spectral control filter segments contg. sp. nonpigment dyes for LCD)

IN Ishikawa, Hironori; Tsurutani, Yasuyuki; Kawana, Makoto; Terui, Yukiko;
 Ozawa, Tetsuo
 PA Mitsubishi Chemical Corp., Japan
 SO Jpn. Kokai Tokkyo Koho, 68 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2006079011	A2	20060323	JP 2004-265939	20040913
PRAI	JP 2004-265939		20040913		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2006079011	IPCI	G02B0005-20 [I,A]; G02F0001-1335 [I,A]; G02F0001-13 [I,C*]
	FTERM	2H048/BA02; 2H048/BA45; 2H048/BA47; 2H048/BB02; 2H048/BB42; 2H091/FA02Y; 2H091/FA07X; 2H091/FA07Z; 2H091/FA11Z; 2H091/FA14Z; 2H091/FA23Z; 2H091/FA32Z; 2H091/FA37Z; 2H091/FA41Z; 2H091/FB02; 2H091/FC02; 2H091/FC29; 2H091/GA01; 2H091/LA16; 2H091/LA17

AB The color filter structure comprises (A) color filter with chromaticity (C light source of CIE std., view angle 2.degree., white display) x .ltoreq.0.35 and y .ltoreq.0.38 having red, green, and blue micropixels colored with pigments and (B) a high-contrast filter with chromaticity x .gtoreq.0.30 and y .ltoreq.0.45 contg. dyes, which have absorption peaks in the visible region, monomol.-dispersed in a resin matrix, wherein the color filter structure as a whole shows chromaticity x = 0.25-0.35 and y = 0.28-0.38. The dyes may be selected from ***squarylium*** compds., (tetraaza)porphyrins, (di)azaporphyrins, and dipyrromethene ***metal*** ***chelates***. The hight-contrast filter may be prepd. by applying a compn. contg. the dyes on an ***optical*** part (light diffuser, polarizer sheet, waveguide, retardation film, etc.) of a planar light source or adding the dyes to the ***optical*** part substrate.

ST color filter LCD contrast chromaticity; high contrast filter LCD dye monomol dispersion; liq crystal display filter color reproducibility

IT ***Chelates***

RL: DEV (Device component use); USES (Uses)
 (dipyrromethenes, dyes, high-contrast filter contg.; high-contrast filters contg. specific dyes for LCD with good color reproducibility)

IT Heterocyclic compounds

RL: DEV (Device component use); USES (Uses)
 (dipyrromethenes, ***metal*** ***chelates***, dyes, high-contrast filter contg.; high-contrast filters contg. specific dyes for LCD with good color reproducibility)

IT Porphyrins

RL: DEV (Device component use); USES (Uses)
 (dyes, high-contrast filter contg.; high-contrast filters contg. specific dyes for LCD with good color reproducibility)

IT Dyes

(high-contrast filter contg.; high-contrast filters contg. specific dyes for LCD with good color reproducibility)

IT Liquid crystal displays

Optical filters
 (high-contrast filters contg. specific dyes for LCD with good color reproducibility)

IT Polyesters, uses

RL: DEV (Device component use); USES (Uses)
 (high-contrast filters contg. specific dyes for LCD with good color reproducibility)

IT Onium compounds

RL: DEV (Device component use); USES (Uses)
 (***squarylium***, dyes, high-contrast filter contg.; high-contrast filters contg. specific dyes for LCD with good color reproducibility)

IT 228091-06-3P

RL: DEV (Device component use); IMF (Industrial manufacture); POF (Polymer in formulation); PREP (Preparation); USES (Uses)
 (color filter binder; high-contrast filters contg. specific dyes for LCD with good color reproducibility)

IT 25034-86-0, Dianal BR 80
RL: DEV (Device component use); POF (Polymer in formulation); USES (Uses)
(high-contrast filter binder; high-contrast filters contg. specific
dyes for LCD with good color reproducibility)
IT 375823-53-3
RL: DEV (Device component use); USES (Uses)
(high-contrast filter contg.; high-contrast filters contg. specific
dyes for LCD with good color reproducibility)
IT 25038-59-9, PET polymer, uses
RL: DEV (Device component use); USES (Uses)
(high-contrast filter substrate; high-contrast filters contg. specific
dyes for LCD with good color reproducibility)

L6 ANSWER 6 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2006:147955 CAPLUS <<LOGINID::20060727>>
DN 144:243475
ED Entered STN: 17 Feb 2006
TI ***Optical*** recording medium, it recording-readout method, and
optical recording apparatus
IN Yashiro, Toru
PA Ricoh Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 21 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2006048892	A2	20060216	JP 2004-326759	20041110
	WO 2006051922	A1	20060518	WO 2005-JP20764	20051107
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
PRAI	JP 2004-193563	A	20040630		
	JP 2004-326759	A	20041110		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2006048892	IPCI	G11B0007-24 [I,A]; G11B0007-244 [I,A]; G11B0007-254 [I,A]; G11B0007-257 [I,A]; B41M0005-26 [I,A]
	FTERM	2H111/EA03; 2H111/EA12; 2H111/EA22; 2H111/EA32; 2H111/EA37; 2H111/FA02; 2H111/FA11; 2H111/FA12; 2H111/FA14; 2H111/FA37; 2H111/FB48; 2H111/GA03; 2H111/GA07; 5D029/JA04; 5D029/JB09; 5D029/JB13; 5D029/JB14; 5D029/JB21; 5D029/JB35; 5D029/JB47; 5D029/LA15; 5D029/LB07; 5D029/RA02; 5D029/WB17; 5D029/WC01
WO 2006051922	IPCI	G11B0007-24 [I,A]; G11B0007-244 [I,A]; G11B0007-257 [I,A]; G11B0007-254 [I,A]; B41M0005-26 [I,A]

AB The invention relates to a rewritable ***optical*** disk comprising a first ***optical*** recording layer and a second ***optical*** recording layer, wherein the second ***optical*** recording layer contains org. dyes including at least one ***squarylium***
metal ***chelate*** compd. and the org. dyes show a DTA peak width of .ltoreq.45.degree.. The protective layer of the ***optical*** disk contains ZnS.

ST ***optical*** recording medium double layer disk ***squarylium*** dye

IT Erasable ***optical*** disks
Optical memory devices
Optical recording

(***optical*** recording medium with ***squarylium*** dye, it recording-readout method, and ***optical*** recording app.)

IT 439591-99-8 823809-64-9 876407-70-4 876407-71-5 876407-72-6 876407-73-7

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)

(***optical*** recording medium with ***squarylium*** dye, it recording-readout method, and ***optical*** recording app.)

IT 1314-98-3, Zinc sulfide, processes

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)

(protective layer; ***optical*** recording medium with ***squarylium*** dye, it recording-readout method, and ***optical*** recording app.)

L6 ANSWER 7 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2006:31396 CAPLUS <<LOGINID::20060727>>

DN 144:138998

ED Entered STN: 13 Jan 2006

TI ***Optical*** recording medium, recording and reproducing method thereof, and ***optical*** recording apparatus

IN Yashiro, Tohru; Nakamura, Yuki; Mikami, Tatsuo; Shimizu, Ikuo; Kinugasa, Motoharu; Toyoda, Hiroshi

PA Ricoh Company, Ltd., Japan; Kyowa Hakko Chemical Co., Ltd.

SO PCT Int. Appl., 79 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM B41M005-26

ICS G11B007-24

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006004172	A1	20060112	WO 2005-JP12523	20050630
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
JP 2006044241	A2	20060216	JP 2005-188996	20050628
PRAI JP 2004-193576	A	20040630		
JP 2005-188996	A	20050628		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2006004172	ICM	B41M005-26
	ICS	G11B007-24
	IPCI	B41M0005-26 [ICM,7]; G11B0007-24 [ICS,7]
JP 2006044241	IPCI	B41M0005-26 [I,A]; G11B0007-244 [I,A]; G11B0007-24 [I,A]; G11B0007-254 [I,A]; G11B0007-257 [I,A]
	FTERM	2H111/EA03; 2H111/EA12; 2H111/EA22; 2H111/EA25; 2H111/EA39; 2H111/FA02; 2H111/FA12; 2H111/FA14; 2H111/FA27; 2H111/FB48; 2H111/FB60; 5D029/JA04; 5D029/JB09; 5D029/JB13; 5D029/JB35; 5D029/JB47; 5D029/LA15; 5D029/LB07; 5D029/WB17

AB An ***optical*** recording medium contains a 1st substrate, a 1st ***information*** layer, an intermediate layer, a 2nd ***information*** layer and a 2nd substrate in this order, where the 1st ***information*** layer contains a 1st recording layer disposed on the 1st substrate and the 2nd ***information*** layer contains a reflective layer, a 2nd recording layer contg. an org. dye and a protective layer which are disposed on the 2nd substrate in this order; and the 2nd recording layer contains an org. dye which is at least one

selected from the group consisting of the specified ***squarylium***
 metal ***chelate*** compds. The material has improved
 light-resistance and can be applied for DVD.

ST ***optical*** recording medium DVD ***squarylium*** ***metal***
 chelate

IT ***Optical*** ROM disks
 Optical recording materials
 (***optical*** recording medium, recording and reproducing method
 thereof, and ***optical*** recording app.)

IT 439591-83-0 439591-91-0 439592-01-5 873447-89-3 873447-90-6
 873447-91-7 873447-92-8
 RL: NUJ (Other use, unclassified); USES (Uses)
 (***optical*** recording medium, recording and reproducing method
 thereof, and ***optical*** recording app.)

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE

(1) Hitachi Maxell Ltd; JP 2003170664 A 2003 CAPLUS
 (2) Pioneer Corporation; EP 1067535 A2 2001 CAPLUS
 (3) Pioneer Corporation; JP 200123237 A 2001
 (4) Pioneer Corporation; US 2005063295 A1 2001 CAPLUS
 (5) Ricoh Company Ltd; EP 1335357 A1 2003 CAPLUS
 (6) Ricoh Company Ltd; US 20030206514 A1 2003
 (7) Ricoh Company Ltd; JP 2003305958 A 2003 CAPLUS

L6 ANSWER 8 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2005:1225013 CAPLUS <<LOGINID::20060727>>
 ED Entered STN: 18 Nov 2005
 TI Towards an Understanding of ***Squarylium*** Dye - Protein
 Interactions by Capillary Electrophoresis Frontal Analysis
 AU Colyer, Christa L.; Yan, Weiying
 CS Department of Chemistry, Wake Forest University, Winston-Salem, NC, 27109,
 USA
 SO Abstracts, 57th Southeast/61st Southwest Joint Regional Meeting of the
 American Chemical Society, Memphis, TN, United States, November 1-4
 (2005), NOV04-322 Publisher: American Chemical Society, Washington, D. C.
 CODEN: 69HOKM
 DT Conference; Meeting Abstract
 LA English
 AB Many high sensitivity anal. techniques require derivatization of the
 analyte prior to anal. Noncovalent interactions between probe mols. and
 analyte mols. typically occur with great speed and minimal sample handling
 and so are attractive options. Understanding the nature of these
 interactions and the compn. of the resulting ***complexes*** presents
 an important area of study that can be facilitated by capillary
 electrophoresis - frontal anal. (CE-FA). In this work, red luminescent
 squarylium dyes Red-1c and Red-3 are shown to effectively label a
 mixt. of proteins in an on-column derivatization procedure employing a
 high salt buffer, thereby facilitating protein anal. by CE with
 laser -induced fluorescence (LIF) detection. Subsequently, in
 frontal anal. mode, the CE method is modified by injection of a large
 sample plug consisting of red ***squarylium*** dye and protein in
 equil. Assuming the protein and the protein-dye ***complex*** have
 approx. the same mobility, which differs from that of the free dye, CE-FA
 produces electropherograms with two plateaus corresponding to these sample
 components. The free dye plateau allows for the detn. of free dye content
 and ultimately, the assocn. const. Ki and no. of binding sites ni for i
 independent binding sites, thereby shedding light on the nature of
 squarylium dye-protein interactions.

L6 ANSWER 9 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2005:1218587 CAPLUS <<LOGINID::20060727>>
 DN 143:485869
 ED Entered STN: 17 Nov 2005
 TI ***Optical*** recording media, ***optical*** memory devices
 therefor, and writing/reading method therefor
 IN Noguchi, Shu; Sato, Tsutomu; Tomura, Tatsuya; Ueno, Yasunobu; Shimizu,
 Ikuo; Kinugasa, Motoharu; Toyota, Hiroshi
 PA Ricoh Co., Ltd., Japan; Kyowa Oil and Fat Co., Ltd.
 SO Jpn. Kokai Tokkyo Koho, 63 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese

IC ICM B41M005-26
ICS G11B007-24
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)
FAN.CNT 1
PATENT NO. KIND DATE APPLICATION NO. DATE

PI JP 2005319728 A2 20051117 JP 2004-140896 20040511
PRAI JP 2004-140896 20040511

CLASS
PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

JP 2005319728 ICM B41M005-26
ICS G11B007-24
IPCI B41M0005-26 [ICM,7]; G11B0007-24 [ICS,7]
FTERM 2H111/EA03; 2H111/EA12; 2H111/EA22; 2H111/EA25;
2H111/EA43; 2H111/FA12; 2H111/FA23; 2H111/FB42;
2H111/FB43; 2H111/FB45; 2H111/FB48; 5D029/JA04;
5D029/JB47; 5D029/JC05; 5D029/MA13; 5D029/WB11;
5D029/WB14

GI

/ Structure 20 in file .gra /

AB The media possess, on substrates, recording layers contg. (A) formazan
chelate compds. having absorption max. (Amax) at .gtoreq.500 nm
and <650 nm, (B) ***squarylium*** compds. having Amax .gtoreq.500 nm
and <650 nm, and (C) compds. having Amax .gtoreq.650 nm and .ltoreq.800
nm. The compds. A and C may be constituted by I and/or II [X, Y, Z =
heterocycle; Z1-Z2 = atoms constituting the heterocycles; A, A1, A2 =
alkyl(carbonyl), aryl(carbonyl), alkenyl, alkoxycarbonyl, heterocycle; B =
alk(en)yl, aryl; B1, B2 = alk(en)ylene, arylene; W = CH2, SO2; n = 0, 1]
and (compds. of) ***metals***. The media may be characterized by
writing/reading wavelength 60-720 nm, track pitch 0.7-0.8 .mu.m, and guide
grooves (as half width) 0.18-0.40 .mu.m.
ST ***optical*** disk wavelength shift dependency minimized; formazan
chelate ***squarylium*** compd ***optical*** disk;
rewritable DVD formazan ***chelate*** utilized
IT ***Optical*** disks
(digital versatile disks, rewritable; rewritable DVD having recording
layers contg. formazan ***chelate*** compds. and ***squarylium***
compds.)
IT Polycarbonates, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(disk substrates; rewritable DVD having recording layers contg.
formazan ***chelate*** compds. and ***squarylium*** compds.)
IT ***Optical*** recording materials
(rewritable DVD having recording layers contg. formazan ***chelate***
compds. and ***squarylium*** compds.)
IT 142315-00-2 344933-85-3 344933-93-3 869361-07-9 869794-28-5
869794-29-6 869794-30-9 869794-31-0 869794-32-1 869794-34-3
RL: TEM (Technical or engineered material use); USES (Uses)
(recording layers; rewritable DVD having recording layers contg.
formazan ***chelate*** compds. and ***squarylium*** compds.)
IT 7429-90-5, Aluminum, uses 7440-22-4, Silver, uses 7440-50-8, Copper,
uses 7440-57-5, Gold, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(reflective layers; rewritable DVD having recording layers contg.
formazan ***chelate*** compds. and ***squarylium*** compds.)

L6 ANSWER 10 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:683221 CAPLUS <<LOGINID::20060727>>
DN 143:338585
ED Entered STN: 01 Aug 2005
TI A regenerative chemodosimeter based on ***metal*** -induced dye
formation for the highly selective and sensitive ***optical***
determination of Hg2+ ions
AU Ros-Lis, Jose V.; Marcos, M. Dolores; Martinez-Manez, Ramon; Rurack, Knut;
Soto, Juan
CS Centro de Investigacion en Quimica Molecular Aplicada Departamento de

SO Quimica Universidad Politecnica de Valencia, Valencia, 46071, Spain
 Angewandte Chemie, International Edition (2005), 44(28), 4405-4407
 CODEN: ACIEF5; ISSN: 1433-7851
 PB Wiley-VCH Verlag GmbH & Co. KGaA
 DT Journal
 LA English
 CC 79-6 (Inorganic Analytical Chemistry)
 Section cross-reference(s): 61
 AB Hg²⁺-ion-triggered formation of a brightly fluorescent ***squaraine***
 dye is used as a novel approach for the design of highly selective and
 sensitive chromofluorogenic probes for the anal. of Hg²⁺ ions down to
 concns. < 2 ppb. Through the adsorption of the sensor on a solid support
 a prototype reusable test strip is also generated.
 ST chemodosimeter ***metal*** dye ***optical*** detn mercury ion
 IT Titration
 (fluorometric; mercury (II) ions detn. in soln. by fluorescent titrn.
 and spectrophotometry with regenerative chromofluorogenic
 chemodosimeter)
 IT Colorimetric indicators
 Fluorescent indicators
 Fluorometry
 Spectrophotometry
 (mercury (II) ions detn. in soln. by fluorescent titrn. and
 spectrophotometry with regenerative chromofluorogenic chemodosimeter)
 IT 7732-18-5, Water, analysis
 RL: AMX (Analytical matrix); ANST (Analytical study)
 (mercury (II) ions detn. in soln. by fluorescent titrn. and
 spectrophotometry with regenerative chromofluorogenic chemodosimeter)
 IT 7439-97-6, Mercury, analysis 99663-97-5, Bis(4-dibutylaminophenyl)
 squaraine 484679-03-0
 RL: ANT (Analyte); ANST (Analytical study)
 (mercury (II) ions detn. in soln. by fluorescent titrn. and
 spectrophotometry with regenerative chromofluorogenic chemodosimeter)
 IT 865244-36-6P 865244-37-7P
 RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST
 (Analytical study); PREP (Preparation); USES (Uses)
 (mercury (II) ions detn. in soln. by fluorescent titrn. and
 spectrophotometry with regenerative chromofluorogenic chemodosimeter)
 IT 107-03-9, 1-Propanethiol
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (mercury (II) ions detn. in soln. by fluorescent titrn. and
 spectrophotometry with regenerative chromofluorogenic chemodosimeter)

RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L6 ANSWER 11 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2005:609170 CAPLUS <<LOGINID::20060727>>
 DN 143:116491
 ED Entered STN: 14 Jul 2005
 TI Wavelength selective absorbing films with good appearance and near
 infrared absorption
 IN Mori, Kenichi; Kamisaka, Sasa; Odo, Shinya; Morishige, Chikao
 PA Toyobo Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 27 pp.
 CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G02B005-22

ICS B32B007-02; B32B027-18

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 73, 74

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2005189736	A2	20050714	JP 2003-434287	20031226
PRAI	JP 2003-434287		20031226		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2005189736	ICM	G02B005-22
	ICS	B32B007-02; B32B027-18
	IPCI	G02B0005-22 [ICM,7]; B32B0007-02 [ICS,7]; B32B0027-18 [ICS,7]
	IPCR	B32B0007-02 [I,A]; B32B0007-02 [I,C*]; B32B0027-18 [I,A]; B32B0027-18 [I,C*]; G02B0005-22 [I,A]; G02B0005-22 [I,C*]
	FTERM	2H048/CA04; 2H048/CA09; 2H048/CA12; 2H048/CA15; 2H048/CA19; 2H048/CA23; 4F100/AK01A; 4F100/AK42B; 4F100/AR00A; 4F100/AT00B; 4F100/BA02; 4F100/BA07; 4F100/CA07; 4F100/CA13A; 4F100/CA18A; 4F100/CA30; 4F100/EH46; 4F100/EJ86; 4F100/GB41; 4F100/JD10; 4F100/JK02; 4F100/JN01B; 4F100/JN02; 4F100/JN08; 4F100/JN08A; 4F100/YY00

AB Title films with max. color difference (.DELTA.E) in transverse direction .ltoreq.1.0 (obtained from 2 points measured within 0.1 m from each edge position and equally divided 3 points between the measured edge 2 points) comprise (A) wavelength selective absorbing layers contg. near IR absorbing colorants, neon cutting colorants, resins, and surfactants and (B) transparent substrates, wherein .DELTA.E = [(La-Lm)² + (aa-am)² + (ba-bm)²]^{1/2}; Lm, am, bm = color tone value of L, a, b in each measured position and La, aa, ba = color tone value of L, a, b in whole measured position. Thus, an anchor coat comprising isopropanol 28.9, water 50.0, Nikasol A 08 (acrylic melamine resin) 10.0, Vylonal MD 1250 (polyester) 10.0, Epostar MA 1001 1.0, and Paintad 32 0.1% was applied on both side of a stretched polyethylene terephthalate film (length direction, 3.5-folds), dried at 120.degree. for 20 s, heated at 140.degree., stretched 3.7-folds in the width direction, relaxed 5% in the width direction at 235.degree. to give a transparent film with total light transmittance 90.2% and haze 0.5%, a wavelength selective absorbing coating comprising cyclopentanone 41.50, toluene 41.50, O-PET (polyester) 16.15, IRG 022 (diimmonium salt) 0.5653, MIR 101 (nickel ***metal*** ***complex***) 0.1547, IR 301 (cyanine compd.) 0.0461, CY 10 (cyanine compd.) 0.0939, SD 184 (***squarylium*** compd.) 0.0471, Paintad 57 0.0340% was applied thereon and dried to give a test piece with near IR transmittance 5.0%, neon light transmittance 34.2%, visible light transmittance 62.5%, L value 75.5, a value -4.2, b value -7.3, .DELTA.E 0.2, and good appearance.

ST wavelength selective absorbing film appearance near IR absorption; polyethylene terephthalate base film; near IR absorbing colorant polyester wavelength selective absorbing layer

IT ***Optical*** materials

(IR absorbers, near iR; wavelength selective absorbing films with good appearance and near IR absorption)

IT Polysiloxanes, uses

RL: MOA (Modifier or additive use); USES (Uses)

(Paintad 57, surfactant in wavelength selective absorbing layers;

wavelength selective absorbing films with good appearance and near IR absorption)

IT IR materials
(absorbers, near IR; wavelength selective absorbing films with good appearance and near IR absorption)

IT Aminoplasts
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(acrylic, anchor coat; wavelength selective absorbing films with good appearance and near IR absorption)

IT Acrylic polymers, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(aminoplast-, anchor coat; wavelength selective absorbing films with good appearance and near IR absorption)

IT Polyesters, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(anchor coat; wavelength selective absorbing films with good appearance and near IR absorption)

IT Transparent films
(base films; wavelength selective absorbing films with good appearance and near IR absorption)

IT Polyesters, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(cardo, wavelength selective absorbing layer; wavelength selective absorbing films with good appearance and near IR absorption)

IT Coloring materials
(near IR absorbing; wavelength selective absorbing films with good appearance and near IR absorption)

IT Cardo polymers
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(polyesters, wavelength selective absorbing layer; wavelength selective absorbing films with good appearance and near IR absorption)

IT Electromagnetic shields
(wavelength selective absorbing films with good appearance and near IR absorption)

IT Coating materials
Surfactants
(wavelength selective absorbing layers; wavelength selective absorbing films with good appearance and near IR absorption)

IT 120860-05-1, Nikasol A 08 146104-37-2, Vylonal MD 1250
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(anchor coat; wavelength selective absorbing films with good appearance and near IR absorption)

IT 25038-59-9, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(base film; wavelength selective absorbing films with good appearance and near IR absorption)

IT 523-42-2D, Cyanine, derivs. 5496-71-9, IRG 022 28984-20-5, MIR 101 173474-43-6 850566-41-5, IR 301
RL: MOA (Modifier or additive use); USES (Uses)
(near IR absorbing colorant; wavelength selective absorbing films with good appearance and near IR absorption)

IT 111-02-4D, Squalene, derivs. 857895-05-7, SD 184
RL: MOA (Modifier or additive use); USES (Uses)
(neon cutting colorant; wavelength selective absorbing films with good appearance and near IR absorption)

IT 164721-64-6, O-PET
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(wavelength selective absorbing layer; wavelength selective absorbing films with good appearance and near IR absorption)

AU Wallace, Karl J.; Gray, Mark; Zhong, Zhenlin; Lynch, Vincent M.; Anslyn, Eric V.

CS Department of Chemistry and Biochemistry, University of Texas at Austin, Austin, TX, 78712-1167, USA

SO Dalton Transactions (2005), (14), 2436-2441
CODEN: DTARAF; ISSN: 1477-9226

PB Royal Society of Chemistry

DT Journal

LA English

CC 78-7 (Inorganic Chemicals and Reactions)
Section cross-reference(s): 22, 25
CASREACT 143:258841

OS

AB An artificial siderophore (I) in the form of a ***squaraine*** dye has been synthesized. The bidentate ***ligand*** ***chelates*** to Fe(III) between the deprotonated hydroxyl group on the ortho position of the ring adjacent to the carbonyl group of the cyclobutadiene ring. The ***optical*** response is due to a subtle geometry change of I on ***chelation*** to Fe(III). This artificial siderophore forms a 2:1 ***ligand*** : ***metal*** ***complex***, as indicated by a sigmoidal isotherm ($K_a = 107 \text{ M}^{-1}$). The ***optical*** response on the addn. of Fe(III) is obsd. at low concns. in comparison to other ***metal*** salts. The X-ray crystal structure and calcd. structures of dye I are also included, and will be discussed.

ST siderophore ***squaraine*** dye prepn iron ***complex***; color
chelating agent siderophore ***squaraine*** dye iron
complex prepn

IT ***Chelating*** agents
Molecular modeling
(prepn. of [bis[[di(hydroxy)ethyl]amino]di(hydroxy)phenyl]
squaraine, study of its properties as artificial siderophore for detection of iron(III), study of its crystal and mol. structures, and mol. modeling)

IT Siderophores
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of [bis[[di(hydroxy)ethyl]amino]di(hydroxy)phenyl]
squaraine, study of its properties as artificial siderophore for detection of iron(III), study of its crystal and mol. structures, and mol. modeling)

IT 108-73-6, 1,3,5-Benzenetriol 111-42-2, Diethanol amine, reactions 2892-51-5, Squaric acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of [bis[[di(hydroxy)ethyl]amino]di(hydroxy)phenyl]
squaraine and study of its properties as artificial siderophore for detection of iron(III))

IT 7487-94-7, Mercury dichloride, processes 7646-79-9, Cobalt dichloride, processes 7646-85-7, Zinc dichloride, processes 7705-08-0, Iron chloride (FeCl₃), processes 7718-54-9, Nickel dichloride, processes 7758-94-3, Iron dichloride 7773-01-5, Manganese dichloride
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)
(prepn. of [bis[[di(hydroxy)ethyl]amino]di(hydroxy)phenyl]
squaraine and study of its properties as artificial siderophore for selective detection of iron(III))

IT 863409-02-3P
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(prepn. of [bis[[di(hydroxy)ethyl]amino]di(hydroxy)phenyl]
squaraine, study of its properties as artificial siderophore for detection of iron(III), study of its crystal and mol. structures, and mol. modeling)

IT 219315-57-8P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of [bis[[di(hydroxy)ethyl]amino]di(hydroxy)phenyl]
squaraine, study of its properties as artificial siderophore for detection of iron(III), study of its crystal and mol. structures, and mol. modeling)

RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L6 ANSWER 13 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:542724 CAPLUS <<LOGINID::20060727>>

ED Entered STN: 23 Jun 2005

TI ***Optical*** Switching Properties of Dye Doped Organic/Inorganic Composite Films

AU Stevens, Nathan; Akins, Daniel L.

CS Center For The Analysis of Structures And Interface, The City College of New York, New York, NY, 10031, USA

SO Abstracts, 37th Middle Atlantic Regional Meeting of the American Chemical Society, New Brunswick, NJ, United States, May 22-25, 2005 (2005), GENE-307 Publisher: American Chemical Society, Washington, D. C. CODEN: 69GVWG

DT Conference; Meeting Abstract

LA English

AB Easily processable composite films consisting of a non-ionic surfactant, Pluronic P123, as the org. component, and silica as the inorg. component have been fabricated. These films served as the host matrixes for various
 squarylium - and xanthene-type org. dyes. Picosecond time-resolved luminescent studies revealed that the excited state lifetimes of the
 squarylium dyes increased when compared to those measured in soln. The xanthene dyes' lifetimes, on the other hand showed a moderate decrease upon being incorporated into the solid matrix. In the case of the
 squarylium dyes, addn. of antimony doped tin oxide nanoparticles led to either an increase or decrease in the lifetimes, depending on the structure and charge of the dye. Also, substantial decreases in excited state lifetimes are obsd. with the addn. of well known org. quenchers: Me viologen, p-nitroaniline, or bromophenol blue. The high quenching efficiencies obsd. indicate that the dyes and the quenchers form
 complexes from both being sequestered within the micro-environment of the micelles formed by the surfactant. The excellent photostability and ultrafast ground state recovery of the intercalated dye
 complexes make these composite films ideally suited for use as the active component in an ***optical*** switching device.

L6 ANSWER 14 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2005:258903 CAPLUS <<LOGINID::20060727>>
 DN 142:345266
 ED Entered STN: 25 Mar 2005
 TI Dipyrromethene dye-containing ***optical*** filters for high-contrast
 electronic displays
 IN Terui, Yukiko; Ozawa, Tetsuo; Haraguchi, Yukiya; Morii, Hidekazu
 PA Mitsubishi Chemical Corp., Japan
 SO Jpn. Kokai Tokkyo Koho, 44 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM G02B005-22
 ICS C09B023-00; C09B047-00; C09B057-00; C09B069-02; C09K011-06;
 H04N005-72; H05B033-02; H05B033-14
 CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 Section cross-reference(s): 41, 73

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005077953	A2	20050324	JP 2003-310699	20030902
PRAI JP 2003-310699		20030902		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2005077953	ICM	G02B005-22
	ICS	C09B023-00; C09B047-00; C09B057-00; C09B069-02; C09K011-06; H04N005-72; H05B033-02; H05B033-14
	IPCI	G02B0005-22 [ICM,7]; C09B0023-00 [ICS,7]; C09B0047-00 [ICS,7]; C09B0057-00 [ICS,7]; C09B0069-02 [ICS,7]; C09B0069-00 [ICS,7,C*]; C09K0011-06 [ICS,7]; H04N0005-72 [ICS,7]; H05B0033-02 [ICS,7]; H05B0033-14 [ICS,7]
	IPCR	C09B0023-00 [I,A]; C09B0023-00 [I,C*]; C09B0047-00 [I,A]; C09B0047-00 [I,C*]; C09B0057-00 [I,A]; C09B0057-00 [I,C*]; C09B0069-00 [I,C*]; C09B0069-02 [I,A]; C09K0011-06 [I,A]; C09K0011-06 [I,C*]; G02B0005-22 [I,A]; G02B0005-22 [I,C*]; H04N0005-72 [I,A]; H04N0005-72 [I,C*]; H05B0033-02 [I,A]; H05B0033-02 [I,C*]; H05B0033-14 [I,A]; H05B0033-14 [I,C*]
	FTERM	2H048/CA04; 2H048/CA15; 2H048/CA19; 3K007/AB17; 3K007/BB06; 3K007/DB03; 4H056/CA01; 4H056/CC01; 4H056/CC02; 4H056/CC08; 4H056/CD05; 4H056/CE03; 4H056/CE06; 4H056/DD03; 4H056/DD06; 4H056/DD29; 4H056/EA09; 4H056/FA01; 5C058/DA03

OS MARPAT 142:345266
 GI

/ Structure 21 in file .gra /

AB The filters for electronic displays (e.g., CRT, LCD, plasma displays) have
 layers contg. dipyrromethene dyes with absorption max. 530-560 nm, such as
 I [R11-R19 = H, halo, nitro, cyano, OH, amino, (esterified)carboxy, sulfo,
 acyl(oxy), alkyl(oxy), alkylthio, alkenyl, aryl(oxy), arylthio,
 heterocyclic(oxy), carbamoyl; M1 = transition ***metal*** atom]. The
 filters may have layers contg. tetraazaporphyrins, ***squarylium***
 compds., or cyanine dyes (Markush structures are given).
 ST dipyrromethene dye ***optical*** filter electronic display contrast;
 CRT LCD plasma display filter dipyrromethene dye; display filter
 dipyrromethene azaporphyrin ***squarylium*** cyanine dye
 IT Cyanine dyes
 Dyes
 Optical filters
 Optical imaging devices
 (dipyrromethene dye-contg. ***optical*** filters for high-contrast
 electronic displays)

IT Polyesters, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (dipyrromethene dye-contg. ***optical*** filters for high-contrast electronic displays)

IT Heterocyclic compounds
 RL: TEM (Technical or engineered material use); USES (Uses)
 (dipyrromethenes, dyes; dipyrromethene dye-contg. ***optical*** filters for high-contrast electronic displays)

IT Onium compounds
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (***squarylium*** , dyes; dipyrromethene dye-contg. ***optical*** filters for high-contrast electronic displays)

IT Porphyrins
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (tetraaza, dyes; dipyrromethene dye-contg. ***optical*** filters for high-contrast electronic displays)

IT 25038-59-9, T 600E/W07, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (A 7300, T 600E/W07; dipyrromethene dye-contg. ***optical*** filters for high-contrast electronic displays)

IT 25034-86-0, Dianal BR 80
 RL: TEM (Technical or engineered material use); USES (Uses)
 (dipyrromethene dye-contg. ***optical*** filters for high-contrast electronic displays)

IT 4174-09-8 220219-47-6 518991-92-9 848417-92-5
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (dyes; dipyrromethene dye-contg. ***optical*** filters for high-contrast electronic displays)

IT 848421-82-9
 RL: TEM (Technical or engineered material use); USES (Uses)
 (dyes; dipyrromethene dye-contg. ***optical*** filters for high-contrast electronic displays)

L6 ANSWER 15 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2005:250068 CAPLUS <<LOGINID::20060727>>
 DN 144:29031
 ED Entered STN: 23 Mar 2005
 TI Low-refractive-index dye-aggregate films with small absorption based on anomalous dispersion
 AU Wakamatsu, Takashi; Watanabe, Keita; Saito, Kazuhiro
 CS National College of Technology, Hitachinaka-shi, Ibaraki, 312-8508, Japan
 SO Applied Optics (2005), 44(6), 906-911
 CODEN: APOPAI; ISSN: 0003-6935
 PB Optical Society of America
 DT Journal
 LA English
 CC 73-4 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
 Section cross-reference(s): 41

AB ***Complex*** -refractive-index spectra of ***Squarylium*** (SQ) dye-aggregate films deposited upon ***metal*** films were studied by measurements of properties of the films including absorption spectra (AS) and attenuated total reflection. ***Complex*** refractive indexes are estd. by Kramers-Kronig anal. for the AS and by a theor. curve-fitting anal. for attenuated total reflection. The dye-aggregate films exhibited an absorption that was blueshifted from that of a monomer, of the H-aggregate formation of SQ mols., and had a changing refractive index with anomalous dispersion about the H-absorption band. From both measurements of the SQ films there is a region of low absorption in the short-wavelength side of the absorption band and the refractive index there is lower than that of glass.

ST refractive index ***squarylium*** dye aggregate film absorption anomalous dispersion

IT Dyes
 (-aggregate low-refractive-index films with small absorption based on anomalous dispersion)

IT Aggregates
 (- ***squarylium*** dye low-refractive-index films with small absorption based on anomalous dispersion)

IT ***Optical*** dispersion
 (low-refractive-index ***squarylium*** dye-aggregate films with
 small absorption based on anomalous)

IT Refractive index
 (of ***squarylium*** dye-aggregate films with small absorption
 based on anomalous dispersion)

IT ATR (attenuated total reflection)
 UV and visible spectra
 (of ***squarylium*** dye-aggregate low-refractive-index films with
 small absorption based on anomalous dispersion)

IT 118418-01-2
 RL: PRP (Properties)
 (-aggregate low-refractive-index films with small absorption based on
 anomalous dispersion)

IT 7440-22-4, Silver, properties
 RL: PRP (Properties)
 (aggregate- ***squarylium*** dye low-refractive-index films with
 small absorption based on anomalous dispersion)

RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L6 ANSWER 16 OF 63 CAPLUS COPYRIGHT 2006 ACS on STM

AN 2005:160706 CAPLUS <<LOGINID::20060727>>

DN 142:269519

ED Entered STN: 25 Feb 2005

TI Film for plasma display filter and plasma display filter comprising the
 same

IN Lee, Yeon-Keun; Park, Sang-Hyun; Kim, Jung-Doo; Choi, Hyun-Seok; Hwang,
 In-Seok; Lee, Dong-Wook

PA LG CHEM, LTD., S. Korea

SO U.S. Pat. Appl. Publ., 12 pp.
 CODEN: USXXCO

DT Patent

LA English

IC ICM G03F009-00

INCL 430007000

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 Section cross-reference(s): 41, 73

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	US 2005042531	A1	20050224	US 2004-920627	20040818
	WO 2005017579	A1	20050224	WO 2004-KR2049	20040816
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CN 1701249	A	20051123	CN 2004-80001092	20040816
	JP 2006514339	T2	20060427	JP 2005-518228	20040816

EP 1656572 A1 20060517 EP 2004-748542 20040816
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK
PRAI KR 2003-57206 A 20030819
KR 2004-53382 A 20040709
WO 2004-KR2049 W 20040816

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2005042531	ICM	G03F009-00
	INCL	430007000
	IPCI	G03F0009-00 [ICM,7]
	IPCR	G02B0005-20 [I,A]; G02B0005-20 [I,C*]; G02B0005-22 [I,A]; G02B0005-22 [I,C*]
	NCL	430/007.000
	ECLA	G02B005/20V; G02B005/22D
WO 2005017579	IPCI	G02B0005-20 [ICM,7]
	IPCR	G02B0005-20 [I,A]; G02B0005-20 [I,C*]; G02B0005-22 [I,A]; G02B0005-22 [I,C*]
CN 1701249	IPCI	G02B0005-20 [ICM,7]; G02B0005-22 [ICS,7]
JP 2006514339	IPCI	G02B0005-22 [I,A]; G09F0009-00 [I,A]
	FTERM	2H048/CA04; 2H048/CA05; 2H048/CA12; 2H048/CA14; 2H048/CA19; 2H048/CA23; 5G435/AA02; 5G435/AA04; 5G435/AA17; 5G435/BB06; 5G435/GG11; 5G435/HH02; 5G435/KK07; 5G435/LL04
EP 1656572	IPCI	G02B0005-20 [ICM,7]; G02B0005-22 [ICS,7]

OS MARPAT 142:269519

AB Disclosed is a film for a plasma display filter comprising a binder resin selected from the group consisting of a polyvinyl chloride resin (PVC), a chlorinated polyvinyl chloride resin (CPVC), and a mixt. thereof; and a dye selected from the group consisting of a near IR absorbing dye, a neon-cut dye, a color control dye and mixts. thereof, which enables integration of a near IR absorbing film and a neon-cut film, experiences less transmittance change at high temp. and humidity, has superior durability and thermal stability, and has a high transmittance in the visible region, and a plasma display filter comprising the same.

ST plasma display filter diimmonium ***squarylium*** salt dye polyvinyl chloride

IT Dyes

(diimmonium salt; film for plasma display filter from)

IT ***Optical*** filters

Plasma display panels

(film for plasma display filter from)

IT 7440-02-0D, Nickel, ***complex***, dithiol-based

RL: DEV (Device component use); USES (Uses)

(dye; film for plasma display filter from)

IT 9002-86-2, PVC

RL: DEV (Device component use); USES (Uses)

(film for plasma display filter from)

L6 ANSWER 17 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:134368 CAPLUS <<LOGINID::20060727>>

DN 142:384561

ED Entered STN: 17 Feb 2005

TI Selective Calcium Ion Sensing with a Bichromophoric ***Squaraine*** Foldamer

AU Arunkumar, Easwaran; Ajayaghosh, Ayyappanpillai; Daub, Joerg

CS Photosciences and Photonics Division, Regional Research Laboratory (CSIR), Trivandrum, 695019, India

SO Journal of the American Chemical Society (2005), 127(9), 3156-3164

CODEN: JACSAT; ISSN: 0002-7863

PB American Chemical Society

DT Journal

LA English

CC 79-3 (Inorganic Analytical Chemistry)

OS CASREACT 142:384561

AB Several ***squaraine*** tethered bichromophoric podand systems 1a-d and a monochromophoric analog 2 were prepd. and characterized. Among these, the bichromophore, 1b, contg. five oxygen atoms in the flexible podand moiety was found to specifically bind Ca²⁺ in the presence of other ***metal*** ions such as K⁺, Na⁺, and Mg²⁺. The selective binding of Ca²⁺ is clear from the absorption and emission spectral changes as well as

by the visual color change of 1b from light-blue to an intense purple-blue. Benesi-Hildebrand and Job plots confirmed a 1:1 binding between 1b and Ca²⁺. Signaling of the binding event is achieved by the cation-induced folding of the bichromophore and the resultant exciton coupling between the ***squaraine*** chromophores. The monochromophoric ***squaraine*** dye 2 failed to give ***optical*** signals upon Ca²⁺ binding, due to the absence of exciton interaction in the bound ***complex***. Titrn. of the folded ***complex*** 9 with EDTA released the ***metal*** ion from the ***complex***, thereby regaining the original absorption and emission properties of the bichromophore. The ***squaraine*** foldamer 1b reported here is the 1st example of a selective chromogenic Ca²⁺ sensor, which works on the principle of exciton interaction in the folded Ca²⁺ ***complex*** of a bichromophore, the ***optical*** properties of which are similar to those of the H-type aggregates of analogous ***squaraine*** dyes.

ST calcium sensing bichromophoric ***squaraine*** foldamer
IT Chromophores
(bichromophores; calcium ion selective sensing with bichromophoric ***squaraine*** foldamer)

IT Absorption spectra
Conformation
Emission spectra
Ion selectivity
(calcium ion selective sensing with bichromophoric ***squaraine*** foldamer)

IT Podands
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(calcium ion selective sensing with bichromophoric ***squaraine*** foldamer)

IT 7440-70-2, Calcium, analysis
RL: ANT (Analyte); ANST (Analytical study)
(calcium ion selective sensing with bichromophoric ***squaraine*** foldamer)

IT 78675-98-6D, ***Squaraine***, derivs.
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(calcium ion selective sensing with bichromophoric ***squaraine*** foldamer)

IT 452067-50-4P
RL: ARG (Analytical reagent use); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(calcium ion selective sensing with bichromophoric ***squaraine*** foldamer)

IT 849667-85-2P 849667-86-3P 849667-87-4P
RL: ARU (Analytical role, unclassified); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)
(calcium ion selective sensing with bichromophoric ***squaraine*** foldamer)

IT 849667-84-1P
RL: ARU (Analytical role, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)
(calcium ion selective sensing with bichromophoric ***squaraine*** foldamer)

IT 93-90-3, 2-(Methylphenylamino)ethanol 19249-03-7 37860-51-8
41024-91-3 42749-27-9 80755-67-5 107885-39-2, 3-(4'-Dimethylaminophenyl)-4-hydroxy-3-cyclobutene-1,2-dione
RL: RCT (Reactant); RACT (Reactant or reagent)
(calcium ion selective sensing with bichromophoric ***squaraine*** foldamer)

IT 452067-49-1P 849667-80-7P 849667-81-8P 849667-82-9P 849667-83-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(calcium ion selective sensing with bichromophoric ***squaraine*** foldamer)

RE.CNT 109 THERE ARE 109 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L6 ANSWER 18 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:1014026 CAPLUS <<LOGINID::20060727>>

DN 141:429711

ED Entered STN: 25 Nov 2004

TI ***Optical*** recording material containing ***metal***

chelate and arylamine, recording method, and apparatus

IN Noguchi, Takashi; Sato, Tsutomu; Tomura, Tatsuya; Ueno, Yasunobu; Shimizu, Ikuo; Kinugasa, Motoharu; Toyota, Hiroshi

PA Ricoh Co., Ltd., Japan; Kyowa Hakko Kogyo Co., Ltd.; Kyowa Oil and Fat Co., Ltd.

SO Jpn. Kokai Tokkyo Koho, 32 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM B41M005-26

ICS G11B007-24; C09B023-00; C09B050-06; C09B050-10; C09B053-00; C09B057-00

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 28

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004330459	A2	20041125	JP 2003-125849	20030430
	US 2004265645	A1	20041230	US 2004-836854	20040430
	US 6936323	B2	20050830		
PRAI	JP 2003-125849	A	20030430		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2004330459	ICM	B41M005-26
	ICS	G11B007-24; C09B023-00; C09B050-06; C09B050-10; C09B053-00; C09B057-00
	IPCI	B41M0005-26 [ICM,7]; G11B0007-24 [ICS,7]; C09B0023-00 [ICS,7]; C09B0050-06 [ICS,7]; C09B0050-10 [ICS,7]; C09B0050-00 [ICS,7,C*]; C09B0053-00 [ICS,7]; C09B0057-00 [ICS,7]
	IPCR	B32B0003-02 [I,A]; B32B0003-02 [I,C*]; B32B0005-16 [I,A]; B32B0005-16 [I,C*]; B41M0005-26 [I,A]; B41M0005-26 [I,C*]; C09B0023-00 [N,A]; C09B0023-00 [N,C*]; C09B0050-00 [N,C*]; C09B0050-06 [N,A];

C09B0050-10 [N,A]; C09B0053-00 [N,A]; C09B0053-00 [N,C*]; C09B0057-00 [N,A]; C09B0057-00 [N,C*];
 G11B0007-24 [I,A]; G11B0007-24 [I,C*]
 FTERM 2H111/EA03; 2H111/FA01; 2H111/FA12; 2H111/FA23;
 2H111/FB42; 2H111/FB48; 4H056/CA01; 4H056/CC02;
 4H056/CC08; 4H056/CD01; 4H056/CE03; 4H056/CE06;
 4H056/DD03; 4H056/DD06; 4H056/EA16; 4H056/FA06;
 5D029/JA04; 5D029/JC05; 5D029/WA01; 5D029/WB11;
 5D029/WB14; 5D029/WC01
 US 2004265645 IPCI B32B0005-16 [ICM,7]
 IPCR B32B0003-02 [I,A]; B32B0003-02 [I,C*]; B32B0005-16 [I,A]; B32B0005-16 [I,C*]; B41M0005-26 [I,A]; B41M0005-26 [I,C*]; C09B0023-00 [N,A]; C09B0023-00 [N,C*]; C09B0050-00 [N,C*]; C09B0050-06 [N,A]; C09B0050-10 [N,A]; C09B0053-00 [N,A]; C09B0053-00 [N,C*]; C09B0057-00 [N,A]; C09B0057-00 [N,C*]; G11B0007-24 [I,A]; G11B0007-24 [I,C*]
 NCL 428/821.000
 ECLA C09B067/00M1; G11B007/246; G11B007/249
 OS MARPAT 141:429711
 AB The material has a recording layer contg. (A) formazan ***metal***
 chelate, (B) ***squarylium*** ***metal*** ***chelate***
 , and (C) diarylamine compd. and recording app. uses the material. The material is recored by light with 600-720 nm wavelength. The material is suited for write-once read many recoding using semiconductor ***laser*** beam, and shows stable reflectivity and modulation.
 ST ***optical*** WORM disk semiconductor ***laser*** beam; formazan
 squarylium ***metal*** ***chelate*** ***optical***
 recording material; diaryl amine ***optical*** recording material
 IT ***Optical*** recording materials
 (***optical*** recording material contg. formazan ***metal***
 chelate, ***squarylium*** ***metal*** ***chelate***
 , and diarylamine compd.)
 IT ***Optical*** disks
 (write-once read-many; ***optical*** recording material contg.
 formazan ***metal*** ***chelate***, ***squarylium***
 metal ***chelate***, and diarylamine compd.)
 IT 36666-44-1 345233-02-5D, ***complex*** with aluminum 345233-06-9D,
 complex with aluminum 463945-11-1D, ***complex*** with Cu
 478535-02-3D, ***complex*** with ni 478535-04-5D, ***complex***
 with Co 478535-07-8D, ***complex*** with Cu 478535-09-0D,
 complex with FeCl3 478628-95-4D, ***complex*** with aluminum
 478628-97-6D, ***complex*** with aluminum 478629-06-0D,
 complex with aluminum 573713-74-3D, ***complex*** with VCl3
 573713-77-6D, ***complex*** with Ni 573713-79-8D, ***complex***
 with Co 573713-85-6D, ***complex*** with Ni 577740-94-4D,
 complex with aluminum 796072-43-0D, ***complex*** with Co
 796072-49-6D, ***complex*** with aluminum 796072-52-1 796072-54-3
 796072-56-5 796072-58-7 796072-60-1 796072-62-3 796072-64-5
 796072-66-7 796072-67-8
 RL: TEM (Technical or engineered material use); USES (Uses)
 (***optical*** recording material contg. formazan ***metal***
 chelate, ***squarylium*** ***metal*** ***chelate***
 , and diarylamine compd.)
 L6 ANSWER 19 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2004:982995 CAPLUS <<LOGINID::20060727>>
 ED Entered STN: 17 Nov 2004
 TI Design and Synthesis of a ***Squaraine*** Dye for Long Wavelength
 Fluorescence-Based Biosensors
 AU Pitner, J. Bruce; Thomas, Joseph; Sherman, Douglas B.; Alarcon, Javier;
 Mohiuddin, Ghulam; Kyler, Keith S.; Venepalli, Bhaskar R.
 CS BD Technologies, Research Triangle Park, NC, 27709, USA
 SO Abstracts, 56th Southeast Regional Meeting of the American Chemical
 Society, Research Triangle Park, NC, United States, November 10-13 (2004),
 GEN-360 Publisher: American Chemical Society, Washington, D. C.
 CODEN: 69FWAQ
 DT Conference; Meeting Abstract
 LA English
 AB The design and synthesis of a novel long wavelength fluorescing
 squaraine dye for conjugation to proteins will be discussed.
 Environmentally sensitive dyes are highly desired for probing

environmental changes that occur when specific proteins bind their corresponding ***ligands***. Long wavelength (>650 nm) dyes would enable through-skin wireless sensing with min. interference from the background. While several environmentally sensitive dyes are known in the visible spectrum, only few are available in the long wavelength region, and none of them are available with reactive groups suitable for protein conjugation. Several derivs. of ***squaraine*** dyes are known to be environmentally sensitive and fluorescent in the long wavelength region, but none of them are available with linkers for protein conjugation. In order to achieve this goal, we developed a synthetic scheme to introduce a reactive linker onto an anilinic ***squaraine*** that is highly sensitive to its environment. The synthesis involves the prepn. of the dye with an iodoacetyl ester linker that readily reacts with a thiol on a cysteine residue of the binding protein. The ***squaraine*** dye was conjugated to known binding proteins that were evaluated as ***optical*** sensors. Our long-term goal is to develop novel non-enzymic fluorescence detection methods for continuous monitoring of analytes. Ultimately, we expect these systems to measure analytes in the body and transmit ***information*** through the skin to an external monitor. Our proposed long-term continuous monitoring systems will have several advantages over presently available systems.

L6 ANSWER 20 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2004:80987 CAPLUS <<LOGINID::20060727>>
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 TI Novel methods and compositions for improved electrophoretic display performance
 IN Wu, Zarng-arh George; Haubrich, Jeanne E.; Wang, Xiaojia; Liang, Rong-chang
 PA Sipix Imaging, Inc., USA
 SO PCT Int. Appl., 38 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM G02F001-00
 CC 48-7 (Unit Operations and Processes)
 Section cross-reference(s): 29, 35, 38, 74, 76

FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004010206	A2	20040129	WO 2003-US21681	20030710
WO 2004010206	A3	20040408		
W:				
AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
RW:				
GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CN 1469177	A	20040121	CN 2002-153622	20021127
AU 2003249041	A1	20040209	AU 2003-249041	20030710
EP 1529242	A2	20050511	EP 2003-765534	20030710
R:				
AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2005533289	T2	20051104	JP 2004-523103	20030710
PRAI US 2002-396680P	P	20020717		
WO 2003-US21681	W	20030710		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2004010206	ICM	G02F001-00
	IPCI	G02F0001-00 [ICM,7]
	IPCR	G02F0001-01 [I,C*]; G02F0001-167 [I,A]
	ECLA	G02F001/167
CN 1469177	IPCI	G02F0001-167 [ICM,7]; G02F0001-01 [ICM,7,C*]; G09F0009-37 [ICS,7]
	IPCR	G02F0001-01 [I,C*]; G02F0001-167 [I,A]
	ECLA	G02F001/167

AU 2003249041 IPCI G02F0001-00 [ICM,7]
 EP 1529242 IPCI G02F0001-167 [ICM,7]; G02F0001-01 [ICM,7,C*]
 IPCR G02F0001-01 [I,C*]; G02F0001-167 [I,A]
 JP 2005533289 IPCI G02F0001-167 [ICM,7]; G02F0001-17 [ICS,7]; G02F0001-01 [ICS,7,C*]

AB The invention is directed to novel methods and compns. useful for improving the performance of electrophoretic displays. The methods comprise adding a high absorbance dye or pigment, or conductive particles or a charge transport material into an electrode protecting layer of the display.

ST electrophoretic display dye pigment conducting particle polymer sealant adhesive; electrophotog photoconductor photoreceptor coated electrode
 metal ***complex*** oxide organometallic

IT Oxidation potential
 (<1.4 V (vs. SCE) for hole transport materials; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Isoalkanes
 RL: NUU (Other use, unclassified); USES (Uses)
 (C7-10; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Cyanine dyes
 (Naphthalo, ***metal*** ***complexes*** ; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT UV absorption
 (UV-visible, of dyes and pigments; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Carbon black, processes
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (Vulcan XC-72, composite sealant with Kraton G-R 6919 and Kraton G 1650; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Polysiloxanes, processes
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
 (acrylates, Ebecryl 1360; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Polysiloxanes, uses
 RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 (acrylates, microcup polymer, laminated with primer-coated ITO/PET film; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Ketones, uses
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
 (alkadienyl; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Nitriles, uses
 Nitro compounds
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
 (and oligomers and polymers of; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Amines, uses
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
 (arom.; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Isoprene-styrene rubber
 Polymers, uses
 Styrene-butadiene rubber, uses
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
 (block, triblock; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Synthetic rubber, uses
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
 (butadiene-isoprene-styrene, hydrogenated, block, composite sealant with Kraton G 1650 and Carb-O-Sil or carbon black; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Metalloporphyrins
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
 (cobalt; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Acrylic polymers, uses
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
 (cyano-contg.; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Isocyanates
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
 (di- and poly- monomers, polymers contg.; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Adhesives
 Coating materials
 Crosslinking
 Dyes
 Electric conductors
 Electrodes
 Electrophotographic apparatus
 Electrophotographic photoconductors (photoreceptors)
 Embossing
 Lamination
 Pigments, nonbiological
 Sealing compositions
 (dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Thermoplastic rubber
 RL: DEV (Device component use); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Alkadienes
 Enamines
 Epoxy resins, uses
 Hydrazones
 Metals , uses
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
 (dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Diazo compounds
 Metallophthalocyanines
 Metalloporphyrins
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)
 (dyes; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for

improved electrophoretic display performance)

IT Oxides (inorganic), uses
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
 (elec. conductive; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Carbonaceous materials (technological products)
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
 (elec. conductor; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT ***Optical*** imaging devices
 (electrophoretic; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Polyurethanes, uses
 RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 (encapsulated TiO₂; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Polyesters, processes
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (film coated with ITO; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Styrene-butadiene rubber, uses
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
 (hydrogenated, block, triblock, Kraton G 1650, composite with Kraton G-R 6919/Carb-O-Sil or Carbon black; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Engineering
 (inventions; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Epoxides
 RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
 (mono- and multifunctional oligomers and polymers contg.; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Azo dyes
 (monoazo, diazo, and polyazo; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Allylic compounds
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
 (multifunctional monomers, polymers of; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Metalloporphyrins
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)
 (nickel, dyes; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Heterocyclic compounds
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
 (nitrogen, five-membered, triazoles; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Alloys, uses
 RL: DEV (Device component use); TEM (Technical or engineered material

use); USES (Uses)
(nonferrous; dyes, pigments, crosslinking sealants and adhesives, and
conducting polymer components and novel methods and compns. for
improved electrophoretic display performance)

IT IR absorption
(of dyes and pigments; dyes, pigments, crosslinking sealants and
adhesives, and conducting polymer components and novel methods and
compns. for improved electrophoretic display performance)

IT Electrophoresis apparatus
(***optical*** imaging; dyes, pigments, crosslinking sealants and
adhesives, and conducting polymer components and novel methods and
compns. for improved electrophoretic display performance)

IT Polymerization
(photopolymn.; dyes, pigments, crosslinking sealants and adhesives, and
conducting polymer components and novel methods and compns. for
improved electrophoretic display performance)

IT Transition ***metal*** ***complexes***
RL: DEV (Device component use); PEP (Physical, engineering or chemical
process); PYP (Physical process); PROC (Process); USES (Uses)
(phthalocyanine, dyes; dyes, pigments, crosslinking sealants and
adhesives, and conducting polymer components and novel methods and
compns. for improved electrophoretic display performance)

IT Vinyl compounds, uses
RL: DEV (Device component use); TEM (Technical or engineered material
use); USES (Uses)
(polymers, from multifunctional monomers; dyes, pigments, crosslinking
sealants and adhesives, and conducting polymer components and novel
methods and compns. for improved electrophoretic display performance)

IT Vanadyl ***complexes***
RL: DEV (Device component use); PEP (Physical, engineering or chemical
process); PYP (Physical process); PROC (Process); USES (Uses)
(porphyrin, dyes; dyes, pigments, crosslinking sealants and adhesives,
and conducting polymer components and novel methods and compns. for
improved electrophoretic display performance)

IT Plastics, uses
RL: DEV (Device component use); TEM (Technical or engineered material
use); USES (Uses)
(thermoplastics; dyes, pigments, crosslinking sealants and adhesives,
and conducting polymer components and novel methods and compns. for
improved electrophoretic display performance)

IT Epoxides
Polyamides, reactions
Polycarbonates, reactions
Polyesters, reactions
Polyethers, reactions
Polyurethanes, reactions
Polyvinyl butyrals
RL: RCT (Reactant); TEM (Technical or engineered material use); RACT
(Reactant or reagent); USES (Uses)
(thermoset or thermoplastic precursor; dyes, pigments, crosslinking
sealants and adhesives, and conducting polymer components and novel
methods and compns. for improved electrophoretic display performance)

IT Plastics, uses
RL: DEV (Device component use); SPN (Synthetic preparation); TEM
(Technical or engineered material use); PREP (Preparation); USES (Uses)
(thermosetting; dyes, pigments, crosslinking sealants and adhesives,
and conducting polymer components and novel methods and compns. for
improved electrophoretic display performance)

IT Metallophthalocyanines
RL: DEV (Device component use); PEP (Physical, engineering or chemical
process); PYP (Physical process); PROC (Process); USES (Uses)
(transition ***metal*** ***complexes*** , dyes; dyes, pigments,
crosslinking sealants and adhesives, and conducting polymer components
and novel methods and compns. for improved electrophoretic display
performance)

IT Metalloporphyrins
RL: DEV (Device component use); PEP (Physical, engineering or chemical
process); PYP (Physical process); PROC (Process); USES (Uses)
(vanadyl, dyes; dyes, pigments, crosslinking sealants and adhesives,
and conducting polymer components and novel methods and compns. for
improved electrophoretic display performance)

IT Nitrile rubber, processes

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent) (vinyl group-terminated, Hycar 1300-43; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Ethers, reactions
RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses) (vinyl, polymers, oligomers and polymers contg., thermoset or thermoplastic precursor; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Ethers, reactions
RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses) (vinyl, thermoset or thermoplastic precursor; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 4687-94-9, Ebecryl 600
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent) (Bisphenol A-contg. diacrylate; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 13048-33-4, 1,6-Hexanediol diacrylate
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent) (HDODA; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 75081-21-9, ITX
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent) (ITX; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 50926-11-9, Indium tin oxide
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (PET film coated with; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 60506-81-2, SR 399
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent) (a tetraacrylate; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 41484-35-9, Irganox 1035
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent) (bis (hindered phenol thioether); dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 138184-94-8, Cab-O-Sil TS 720
RL: TEM (Technical or engineered material use); USES (Uses) (composite sealant with Kraton G-R 6919 and Kraton G 1650; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 65181-78-4, N,N'-Bis(3-methylphenyl)-N-N'-diphenylbenzidine
RL: DEV (Device component use); USES (Uses) (dye, in Duro-Tak adhesive layer; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 12227-55-3, Orasol Red BL 12237-23-9, Orasol Black CN 61931-55-3, Orasol Yellow 2GLN
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(dye, in Duro-Tak adhesive layer; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 56996-93-1, Sudan Black 61901-87-9, Orasol Black RLI 71799-11-6, Orasol Blue GL
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
 (dye, in Duro-Tak adhesive layer; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 14916-87-1, FC 3275
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (dye; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 77-58-7, Dibutyltin dilaurate
 RL: CAT (Catalyst use); USES (Uses)
 (dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 78-93-3, Methyl ethyl ketone, uses
 RL: DEV (Device component use); NUU (Other use, unclassified); USES (Uses)
 (dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 147-14-8D, Copper phthalocyanine, derivs. 7429-90-5D, Aluminum, phthalocyanine or naphthalocyanine ***complexes*** 7439-89-6D, Iron, phthalocyanine or naphthalocyanine ***complexes*** 7439-92-1D, Lead, phthalocyanine or naphthalocyanine ***complexes*** 7439-95-4, Magnesium, processes 7440-02-0D, Nickel, naphthalocyanine derivs. ***complexes*** 7440-31-5D, Tin, phthalocyanine or naphthalocyanine ***complexes*** 7440-32-6D, Titanium, naphthalocyanine derivs. ***complexes*** 7440-43-9D, Cadmium, phthalocyanine or naphthalocyanine ***complexes*** 7440-48-4D, Cobalt, naphthalocyanine derivs. ***complexes*** 7440-62-2D, Vanadium, phthalocyanine or naphthalocyanine ***complexes*** 7440-66-6D, Zinc, phthalocyanine or naphthalocyanine ***complexes*** 7440-74-6D, Indium, phthalocyanine or naphthalocyanine ***complexes*** 78675-98-6D, ***Squaraine***, derivs.
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)
 (dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 9003-42-3, Poly(ethyl methacrylate)
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent); USES (Uses)
 (dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 74-82-8D, Methane, triaryl derivs. 81-33-4 85-83-6, Sudan IV 85-86-9, Sudan III 86-74-8D, Carbazole, derivs. 92-52-4D, Biphenyl, derivs. 129-79-3, 2,4,7-Trinitro-9-fluorenone 288-42-6D, Oxazole, derivs. 288-99-3D, 1,3,4-Oxadiazole, 2,5-bis(4-N,N'-dialkylaminophenyl) 486-25-9, Fluorenone 486-25-9D, Fluorenone, oligomers and polymers of 809-73-4 842-07-9, Sudan yellow 966-88-1D, Benzaldehyde-N,N-diphenylhydrazone, p-dialkylamino derivs. 1159-53-1 1229-55-6, Sudan R 1450-63-1, 1,1,4,4-Tetraphenylbutadiene 1484-96-4 1518-16-7 2085-33-8 2417-00-7 2455-14-3 2491-91-0, 2,5-Bis(4-methylphenyl)-1,3,4-oxadiazole 3118-97-6, Sudan II 4197-25-5, Sudan Black B 5152-94-3 7429-90-5, Aluminum, uses 7429-90-5D, Aluminum, alloys 7439-89-6, Iron, uses 7439-89-6D, Iron, alloys 7440-02-0D, Nickel, alloys 7440-22-4, Silver, uses 7440-22-4D, Silver, alloys 7440-50-8, Copper, uses 7440-50-8D, Copper, alloys 7440-57-5, Gold, uses 7440-57-5D, Gold, alloys 7440-74-6, Indium, uses 7440-74-6D, Indium, alloys 7782-42-5, Graphite, uses 9003-39-8, Polyvinylpyrrolidone 9003-55-8, Styrene-butadiene copolymer 11120-54-0D, Oxadiazole, derivs. 12673-86-8, Antimony tin oxide 14705-63-6 14705-63-6D, alkylated and alkoxyated derivs. 14752-00-2 15546-43-7, N,N,N',N'-

Tetraphenylbenzidine 20441-06-9 23467-27-8 24937-78-8,
 Ethylene-vinyl acetate copolymer 26009-24-5, Poly(p-phenylene vinylene)
 33200-26-9 35079-58-4 35458-94-7 36118-45-3D, Pyrazoline, Ph
 dialkylaminostyrene dialkylaminophenyl derivs. 36118-45-3D, Pyrazoline,
 derivs. 41584-66-1 43134-09-4 51325-95-2 58280-31-2 58328-31-7,
 4,4'-Bis(carbazol-9-yl)biphenyl 58473-78-2 59765-31-0 59869-79-3
 69361-50-8D, bis(4-N,N-dialkylamino) 75232-44-9 76185-65-4
 82532-76-1 83992-95-4 85171-94-4 89114-90-9 89114-91-0
 89991-16-2 93376-18-2, (4-Butoxycarbonyl-9-fluorenylidene)malononitrile
 93975-08-7 93975-09-8 94665-89-1 95270-88-5, Polyfluorene
 95993-52-5 96492-45-4 97671-90-4 103079-11-4 105389-36-4,
 4,4',4'''-Tris(N,N-diphenylamino)triphenylamine 117944-65-7, Indium zinc
 oxide 123847-85-8 126213-51-2, Poly(3,4,-ethylenedioxythiophene)
 127022-77-9, Hexakis(benzylthio)benzene 138171-14-9 138372-67-5
 139092-78-7 139255-17-7 141752-82-1 142289-08-5 150405-69-9
 154896-84-1 164534-25-2 174493-15-3 182507-83-1 184101-39-1
 185690-39-5, 4,4',4'''-Tris[N-(1-naphthyl)-N-phenylamino]triphenylamine
 203799-76-2 254435-83-1, Sudan Blue 376386-75-3 482654-95-5
 649735-34-2 649735-35-3 649735-37-5D, 2,5-bis(4-dialkylaminophenyl)
 derivs. 649735-38-6 650609-45-3 650609-46-4 650609-47-5 650609-4
 8-6
 RL: DEV (Device component use); TEM (Technical or engineered material
 use); USES (Uses)
 (dyes, pigments, crosslinking sealants and adhesives, and conducting
 polymer components and novel methods and compns. for improved
 electrophoretic display performance)
 IT 68-12-2, Dimethylformamide, uses 108-21-4, Isopropyl acetate 108-88-3,
 Toluene, uses 110-54-3, Hexane, uses 141-78-6, Ethyl acetate, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (dyes, pigments, crosslinking sealants and adhesives, and conducting
 polymer components and novel methods and compns. for improved
 electrophoretic display performance)
 IT 650634-86-9, Duro-Tak 1105
 RL: PEP (Physical, engineering or chemical process); PYP (Physical
 process); TEM (Technical or engineered material use); PROC (Process); USES
 (Uses)
 (dyes, pigments, crosslinking sealants and adhesives, and conducting
 polymer components and novel methods and compns. for improved
 electrophoretic display performance)
 IT 6712-98-7 15625-89-5, Trimethylolpropane triacrylate 165169-07-3,
 Desmodur N 3400 601484-87-1
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (dyes, pigments, crosslinking sealants and adhesives, and conducting
 polymer components and novel methods and compns. for improved
 electrophoretic display performance)
 IT 198-55-0, Perylene 488-86-8D, Croconic acid, amine derivs. 3317-67-7,
 Cobalt phthalocyanine 12226-78-7, C.I.Solvent Blue 67 14055-02-8D,
 Nickel phthalocyanine, derivs. 14172-92-0, Nickel tetraphenylporphine
 33273-09-5D, derivs. 52324-93-3, Titanium phthalocyanine
 RL: DEV (Device component use); PEP (Physical, engineering or chemical
 process); PYP (Physical process); PROC (Process); USES (Uses)
 (dyes; dyes, pigments, crosslinking sealants and adhesives, and
 conducting polymer components and novel methods and compns. for
 improved electrophoretic display performance)
 IT 650609-44-2P
 RL: DEV (Device component use); PEP (Physical, engineering or chemical
 process); PYP (Physical process); SPN (Synthetic preparation); PREP
 (Preparation); PROC (Process); USES (Uses)
 (electrophoretic TiO2 encapsulant; dyes, pigments, crosslinking
 sealants and adhesives, and conducting polymer components and novel
 methods and compns. for improved electrophoretic display performance)
 IT 13463-67-7, R900, uses
 RL: DEV (Device component use); USES (Uses)
 (encapsulated with electrophoretic polymer; dyes, pigments,
 crosslinking sealants and adhesives, and conducting polymer components
 and novel methods and compns. for improved electrophoretic display
 performance)
 IT 25038-59-9, PET, processes
 RL: DEV (Device component use); PEP (Physical, engineering or chemical
 process); PYP (Physical process); TEM (Technical or engineered material
 use); PROC (Process); USES (Uses)
 (film coated with ITO; dyes, pigments, crosslinking sealants and

adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 119313-12-1, Irgacure 369
 RL: CAT (Catalyst use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)
 (initiator; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 105729-79-1 700836-36-8
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
 (isoprene-styrene rubber, block, triblock; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 7440-02-0, Nickel, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (microcup base template; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 4687-94-9DP, Ebecryl 600, polymers contg. 13048-33-4DP, HDDA, polymers contg. 15625-89-5DP, TMPTA, polymers contg. 60506-81-2DP, SR 399, polymers contg.
 RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 (microcup polymer, laminated with primer-coated ITO/PET film; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 9003-18-3
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
 (nitrile rubber, vinyl group-terminated, Hycar 1300-43; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 12047-27-7, K-Plus 16, uses
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
 (pigment, in Duro-Tak adhesive layer; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 115452-84-1, Disperbyk 163
 RL: MOA (Modifier or additive use); USES (Uses)
 (polymeric dispersant; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 649735-33-1P
 RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 (primer coating for ITO/PET film; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 106107-54-4 694491-73-1
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
 (styrene-butadiene rubber, block, triblock; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 53568-48-2, Disperse-Ayd 6
 RL: MOA (Modifier or additive use); USES (Uses)
 (surfactant; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 79-10-7D, Acrylic acid, multifunctional and multi- esters, oligomers and polymers contg. 79-10-7D, Acrylic acid, multifunctional esters
 79-41-4D, Methacrylic acid, multifunctional and multi- esters, oligomers and polymers contg. 79-41-4D, Methacrylic acid, multifunctional esters
 100-42-5D, Styrene, derivs. 100-42-5D, Styrene, oligomers and polymers contg. 9003-01-4D, Polyacrylic acid, alkyl esters 9004-36-8, Cellulose acetate butyrate 25087-26-7D, Polymethacrylic acid, alkyl esters
 RL: RCT (Reactant); TEM (Technical or engineered material use); RACT

(Reactant or reagent); USES (Uses)
 (thermoset or thermoplastic precursor; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)
 IT 477290-74-7, Galden HT 200
 RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
 (tri-hydric amino alc.; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

L6 ANSWER 21 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2003:875484 CAPLUS <<LOGINID::20060727>>
 DN 139:361233
 ED Entered STN: 07 Nov 2003
 TI Bis-transition- ***metal*** - ***chelate*** -probes
 IN Ebright, Richard H.; Ebright, Yon W.
 PA Rutgers, the State of University of New Jersey, USA
 SO PCT Int. Appl., 80 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM G01N
 CC 9-16 (Biochemical Methods)
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003091689	A2	20031106	WO 2002-US236180	20021112
	WO 2003091689	A3	20041223		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	CA 2488819	AA	20031106	CA 2002-2488819	20021112
	AU 2002367810	A1	20031110	AU 2002-367810	20021112
	EP 1506402	A2	20050216	EP 2002-807321	20021112
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK			
	US 2004096887	A1	20040520	US 2003-665227	20030917
	US 6919333	B2	20050719		
	US 2005031545	A1	20050210	US 2004-946786	20040921
PRAI	US 2002-367775P	P	20020328		
	US 2002-410267P	P	20020913		
	WO 2002-US36180	W	20021112		
	US 2003-665227	A2	20030917		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2003091689	ICM	G01N
	IPCI	G01N [ICM,7]
	IPCR	C07D0209-00 [I,C*]; C07D0209-14 [I,A]
	ECLA	C07D209/14
CA 2488819	IPCI	C07F0015-04 [ICM,7]; C07F0015-06 [ICS,7]; C07F0015-00 [ICS,7,C*]; C07F0001-08 [ICS,7]; C07F0001-00 [ICS,7,C*]; C07D0209-14 [ICS,7]; C07D0209-00 [ICS,7,C*]; G01N0033-53 [ICS,7]; G01N0033-532 [ICS,7]; G01N0033-542 [ICS,7]; G01N0033-536 [ICS,7,C*]; G01N0033-543 [ICS,7]; G01N0033-58 [ICS,7]
	IPCR	C07D0209-00 [I,C*]; C07D0209-14 [I,A]
	ECLA	C07D209/14
AU 2002367810	IPCI	G01N0033-532 [ICM,7]; C07D0209-14 [ICS,7]; C07D0209-00 [ICS,7,C*]
	IPCR	C07D0209-00 [I,C*]; C07D0209-14 [I,A]
EP 1506402	IPCI	G01N0033-532 [ICM,7]; C07D0209-14 [ICS,7]; C07D0209-00 [ICS,7,C*]
	IPCR	C07D0209-00 [I,C*]; C07D0209-14 [I,A]

US 2004096887 IPCI C12Q0001-68 [ICM,7]; G01N0033-53 [ICS,7]; C07F0003-06 [ICS,7]; C07F0003-00 [ICS,7,C*]; C07F0005-00 [ICS,7]; C07F0015-04 [ICS,7]; C07F0015-06 [ICS,7]; C07F0015-00 [ICS,7,C*]
 IPCR C12Q0001-68 [I,A]; C12Q0001-68 [I,C*]; G01N0033-533 [I,A]; G01N0033-533 [I,C*]
 NCL 435/006.000
 ECLA C12Q001/68B2H+563/113; G01N033/533

US 2005031545 IPCI A61K0051-00 [ICM,7]
 IPCR C07D0209-00 [I,C*]; C07D0209-14 [I,A]; C12Q0001-68 [I,A]; C12Q0001-68 [I,C*]; G01N0033-533 [I,A]; G01N0033-533 [I,C*]
 NCL 424/009.365
 ECLA C07D209/14; C12Q001/68B2H+563/113; G01N033/533

OS MARPAT 139:361233

AB A probe for labeling a target material is provided including two transition- ***metal*** ***chelates*** and detectable group. The probe has the general structural formula (I) wherein: (a) Y and Y' are each a transition ***metal***, (b) R1 and R1 are each independently CH(COO-), CH(COOH), or absent; (c) R2 and R2 are linkers each having a length of from about 3.0 to about 20 A; and (d) X is a detectable group. The linkers may be linear or branched, may contain arom. moieties, and may optionally be further substituted. Methods of use of the probe in detecting and analyzing target materials of interest also are provided.

ST bis transition ***metal*** ***chelate*** probe
 IT Proteins
 RL: ANT (Analyte); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent)
 (-protein binding; bis-transition- ***metal*** - ***chelate*** -probes)

IT Functional groups
 (Alkoxy; bis-transition- ***metal*** - ***chelate*** -probes)

IT Probes (nucleic acid)
 RL: ANT (Analyte); ANST (Analytical study)
 (Bis-transition- ***metal*** - ***chelate*** -probes;
 bis-transition- ***metal*** - ***chelate*** -probes)

IT Transcription factors
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (CAP (catabolite gene activator protein), hexahistidine tagged;
 bis-transition- ***metal*** - ***chelate*** -probes)

IT Molecules
 (Cleavage agents; bis-transition- ***metal*** - ***chelate*** -probes)

IT Functional groups
 (Detectable; bis-transition- ***metal*** - ***chelate*** -probes)

IT Laboratory ware
 (Flow cell; bis-transition- ***metal*** - ***chelate*** -probes)

IT Energy transfer
 (Fluorescent; bis-transition- ***metal*** - ***chelate*** -probes)

IT Atoms
 (Heavy; bis-transition- ***metal*** - ***chelate*** -probes)

IT Atoms
 (Paramagnetic; bis-transition- ***metal*** - ***chelate*** -probes)

IT Molecules
 (Photosensitizers; bis-transition- ***metal*** - ***chelate*** -probes)

IT Self-association
 (Protein; bis-transition- ***metal*** - ***chelate*** -probes)

IT Fluorometry
 (anisotropy; bis-transition- ***metal*** - ***chelate*** -probes)

IT Affinity
 Alkyl groups
 Animal tissue
 Aryl groups
 Biological materials
 Capillary tubes
 Carboxyl group
 Cell
 Chelating agents
 Chemical formula
 Chromophores
 Concentration (condition)

Conformational transition
 Coupling reaction
 Crosslinking agents
 Cuvettes
 Cyanine dyes
 Fluorescence
 Fluorescence quenching
 Fluorescence resonance energy transfer
 Fluorescent dyes
 Fluorescent substances
 Gels
 Immobilization, molecular or cellular
 Isotope indicators
 Labels
 Length
 Linking agents
 Luminescent substances
 Materials
 Membrane, biological
 Methyl group
 Microtiter plates
 Molecules
 NMR spectroscopy
 Optical absorption
 Organ, animal
 Phosphorescent substances
 Protein sequences
 Reaction
 Solids
 Solutions
 Spin labels
 Surface
 Synthesis
 Synthons
 Tautomers
 Test kits
 Test tubes
 Washing
 (bis-transition- ***metal*** - ***chelate*** -probes)
IT Peptides, analysis
 Proteins
 Transition ***metal*** compounds
 RL: ANT (Analyte); ANST (Analytical study)
 (bis-transition- ***metal*** - ***chelate*** -probes)
IT Haptens
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (bis-transition- ***metal*** - ***chelate*** -probes)
IT Isotopes
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (bis-transition- ***metal*** - ***chelate*** -probes)
IT Thiols, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (bis-transition- ***metal*** - ***chelate*** -probes)
IT Amines, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (bis-transition- ***metal*** - ***chelate*** -probes)
IT Hydrazides
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (bis-transition- ***metal*** - ***chelate*** -probes)
IT Fluorometry
 (correlation; bis-transition- ***metal*** - ***chelate*** -probes)
IT Thiols, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (dithiols, Low-mol.-wt.; bis-transition- ***metal*** - ***chelate***
 -probes)
IT Fluorometry
 (emission; bis-transition- ***metal*** - ***chelate*** -probes)
IT Alkyl groups
 (ethyl group; bis-transition- ***metal*** - ***chelate*** -probes)
IT Fluorometry
 (lifetime; bis-transition- ***metal*** - ***chelate*** -probes)
IT Chromatography

(matrix; bis-transition- ***metal*** - ***chelate*** -probes)

IT Fluorometry
(polarization, polarization; bis-transition- ***metal*** -
chelate -probes)

IT Hydroxyl group
(probes contg.; bis-transition- ***metal*** - ***chelate***
-probes)

IT Acids, uses
Aromatic compounds
Carboxylic acids, uses
Halogens
Salts, uses
Transition ***metals*** , uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(probes contg.; bis-transition- ***metal*** - ***chelate***
-probes)

IT Transition ***metal*** ***complexes***
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(probes; bis-transition- ***metal*** - ***chelate*** -probes)

IT Carboxylic acids, uses
Sulfonic acids, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(salts, probes contg.; bis-transition- ***metal*** - ***chelate***
-probes)

IT 71-00-1D, Histidine, compds. contg. 64134-30-1
RL: ANT (Analyte); RCT (Reactant); ANST (Analytical study); RACT (Reactant
or reagent)
(bis-transition- ***metal*** - ***chelate*** -probes)

IT 64-19-7D, Acetic acid, probes contg., uses 7704-34-9D, Sulfur, probes
contg. 7782-44-7D, Oxygen, probes contg. 14701-22-5D, probes contg.,
uses 15158-11-9D, probes contg., uses 22541-53-3D, probes contg., uses
23713-49-7D, Zincion, probes contg., uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(bis-transition- ***metal*** - ***chelate*** -probes)

IT 389059-73-8P 389059-74-9P
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)
(bis-transition- ***metal*** - ***chelate*** -probes)

IT 50-00-0, Formaldehyde, reactions 90-47-1, Xanthenone 92-83-1, Xanthene
95-21-6, 2-Methylbenzoxazole 109-06-8, 2-Methylpyridine 120-75-2,
2-Methylbenzothiazole 135-67-1, Phenoxazine 1640-39-7,
2,3,3-Trimethylindole 2143-61-5, Propyl 2682-45-3 4808-69-9
6764-43-8 7718-54-9, Nickel chloride (NiCl₂), reactions 20686-66-2
21431-16-3 41532-84-7 113995-55-4 129179-17-5 132557-72-3
146368-15-2 146397-20-8 157646-47-4 618886-23-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(bis-transition- ***metal*** - ***chelate*** -probes)

IT 618886-24-1P 618886-25-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(bis-transition- ***metal*** - ***chelate*** -probes)

IT 618886-25-2DP, derivs. 618886-26-3DP, derivs.
RL: SPN (Synthetic preparation); PREP (Preparation)
(bis-transition- ***metal*** - ***chelate*** -probes)

IT 78675-98-6, ***Squaraine***
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(dye; bis-transition- ***metal*** - ***chelate*** -probes)

IT 64134-28-7 64134-29-8 64134-31-2 64134-32-3 64134-33-4
148916-02-3 401796-60-9 620927-23-3
RL: PRP (Properties)
(unclaimed sequence; bis-transition- ***metal*** - ***chelate***
-probes)

L6 ANSWER 22 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:818463 CAPLUS <<LOGINID::20060727>>

DN 139:324209

ED Entered STN: 17 Oct 2003

TI Photopolymerizable compositions containing ***metal***
complexes of ***squarylium*** compounds

IN Yamaoka, Tsuguo; Shimizu, Ikuo; Toyoda, Hiroshi; Kinugasa, Motoharu;
Ikuta, Masanori; Katagi, Kyoko

PA Kyowa Yuka Co., Ltd., Japan

SO PCT Int. Appl., 31 pp.
 CODEN: PIXXD2
 DT Patent
 LA Japanese
 IC ICM C08F002-50
 ICS C09B023-04; C09B057-00; G03F007-029; C07D231-22; C07D403-08;
 C07D413-08; C07D417-08; C07D231-20; C07F003-00; C07F003-06;
 C07F005-06
 CC 37-6 (Plastics Manufacture and Processing)
 Section cross-reference(s): 38, 42, 74

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003085005	A1	20031016	WO 2003-JP4254	20030403
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2003236353	A1	20031020	AU 2003-236353	20030403
	EP 1493757	A1	20050105	EP 2003-745891	20030403
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	US 2005164120	A1	20050728	US 2003-508528	20030403
PRAI	JP 2002-104616	A	20020408		
	WO 2003-JP4254	W	20030403		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2003085005	ICM	C08F002-50
	ICS	C09B023-04; C09B057-00; G03F007-029; C07D231-22; C07D403-08; C07D413-08; C07D417-08; C07D231-20; C07F003-00; C07F003-06; C07F005-06
	IPCI	C08F0002-50 [ICM,7]; C08F0002-46 [ICM,7,C*]; C09B0023-04 [ICS,7]; C09B0023-00 [ICS,7,C*]; C09B0057-00 [ICS,7]; G03F0007-029 [ICS,7]; C07D0231-22 [ICS,7]; C07D0403-08 [ICS,7]; C07D0403-00 [ICS,7,C*]; C07D0413-08 [ICS,7]; C07D0413-00 [ICS,7,C*]; C07D0417-08 [ICS,7]; C07D0417-00 [ICS,7,C*]; C07D0231-20 [ICS,7]; C07D0231-00 [ICS,7,C*]; C07F0003-00 [ICS,7]; C07F0003-06 [ICS,7]; C07F0005-06 [ICS,7]; C07F0005-00 [ICS,7,C*]
	IPCR	C07D0261-00 [I,C*]; C07D0261-12 [I,A]; C07D0403-00 [I,C*]; C07D0403-08 [I,A]; C07D0413-00 [I,C*]; C07D0413-06 [I,A]; C07D0413-08 [I,A]; C07D0417-00 [I,C*]; C07D0417-08 [I,A]; C08F0002-46 [I,C*]; C08F0002-50 [I,A]; G03F0007-029 [I,A]; G03F0007-029 [I,C*]
	ECLA	C07D417/08; C07D231/22; C07D261/12; C07D403/08; C07D413/06+261+209C; C07D413/08; C08F002/50; G03F007/029
AU 2003236353	IPCI	C08F0002-50 [ICM,7]; C08F0002-46 [ICM,7,C*]; C07D0413-08 [ICS,7]; C07D0413-00 [ICS,7,C*]; C07D0417-08 [ICS,7]; C07D0417-00 [ICS,7,C*]; C07D0231-20 [ICS,7]; C07F0003-00 [ICS,7]; C07F0003-06 [ICS,7]; C07F0005-06 [ICS,7]; C07F0005-00 [ICS,7,C*]; C09B0023-04 [ICS,7]; C09B0023-00 [ICS,7,C*]; C09B0057-00 [ICS,7]; G03F0007-029 [ICS,7]; C07D0231-22 [ICS,7]; C07D0231-00 [ICS,7,C*]; C07D0403-08 [ICS,7]; C07D0403-00 [ICS,7,C*]
	IPCR	C07D0261-00 [I,C*]; C07D0261-12 [I,A]; C07D0403-00 [I,C*]; C07D0403-08 [I,A]; C07D0413-00 [I,C*]; C07D0413-06 [I,A]; C07D0413-08 [I,A]; C07D0417-00 [I,C*]; C07D0417-08 [I,A]; C08F0002-46 [I,C*]; C08F0002-50 [I,A]; G03F0007-029 [I,A]; G03F0007-029 [I,C*]
EP 1493757	IPCI	C08F0002-50 [ICM,7]; C08F0002-46 [ICM,7,C*];

C09B0023-04 [ICS,7]; C09B0023-00 [ICS,7,C*];
 C09B0057-00 [ICS,7]; G03F0007-029 [ICS,7]; C07D0231-22
 [ICS,7]; C07D0403-08 [ICS,7]; C07D0403-00 [ICS,7,C*];
 C07D0413-08 [ICS,7]; C07D0413-00 [ICS,7,C*];
 C07D0417-08 [ICS,7]; C07D0417-00 [ICS,7,C*];
 C07D0231-20 [ICS,7]; C07D0231-00 [ICS,7,C*];
 C07F0003-00 [ICS,7]; C07F0003-06 [ICS,7]; C07F0005-06
 [ICS,7]; C07F0005-00 [ICS,7,C*]
 IPCR C07D0261-00 [I,C*]; C07D0261-12 [I,A]; C07D0403-00
 [I,C*]; C07D0403-08 [I,A]; C07D0413-00 [I,C*];
 C07D0413-06 [I,A]; C07D0413-08 [I,A]; C07D0417-00
 [I,C*]; C07D0417-08 [I,A]; C08F0002-46 [I,C*];
 C08F0002-50 [I,A]; G03F0007-029 [I,A]; G03F0007-029
 [I,C*]
 ECLA C07D417/08; C07D231/22; C07D261/12; C07D403/08;
 C07D413/06+261+209C; C07D413/08; C08F002/50;
 G03F007/029
 US 2005164120 IPCI G03C0001-492 [ICM,7]; G03C0001-005 [ICM,7,C*]
 NCL 430/281.100
 OS MARPAT 139:324209
 AB The photopolymerizable compn. comprises a ***metal*** ***complex***
 of a ***squarylium*** compd., a radical generating agent and a compd.
 contg. .gtoreq.1 ethylenically unsatd. double bond. The
 photopolymerizable compn. exhibits enhanced light sensitivity, and is
 useful for presensitized plate, recording material for visible
 laser (such as dry film resist, digital proof and hologram),
 panchromatic sensitizing material (for example, a sensitizing material for
 a hologram and a sensitizing material for full color display comprising a
 photopolymerizable compn. included in a microcapsule), coating material,
 adhesive, etc.
 ST photopolymerizable compn ***squarylium*** compd ***metal***
 complex
 IT Adhesives
 Coating materials
 Photoresists
 (photopolymerizable compns. contg. ***metal*** ***complexes***
 of ***squarylium*** compds. for presensitized plates, visible
 laser recording materials, coatings and adhesives)
 IT Polymerization catalysts
 (photopolymn.; photopolymerizable compns. contg. ***metal***
 complexes of ***squarylium*** compds. for presensitized
 plates, visible ***laser*** recording materials, coatings and
 adhesives)
 IT Lithographic plates
 (presensitized; photopolymerizable compns. contg. ***metal***
 complexes of ***squarylium*** compds. for presensitized
 plates, visible ***laser*** recording materials, coatings and
 adhesives)
 IT 6542-67-2, 2,4,6-Tris(trichloromethyl)-s-triazine
 RL: CAT (Catalyst use); USES (Uses)
 (photopolymerizable compns. contg. ***metal*** ***complexes***
 of ***squarylium*** compds. for presensitized plates, visible
 laser recording materials, coatings and adhesives)
 IT 439591-71-6P 439591-74-9P 439591-76-1P 439591-99-8P 612830-89-4P
 612830-90-7P 612830-91-8P 612830-92-9P 612830-93-0P
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (photopolymerizable compns. contg. ***metal*** ***complexes***
 of ***squarylium*** compds. for presensitized plates, visible
 laser recording materials, coatings and adhesives)
 IT 612830-94-1P
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM
 (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (photopolymerizable compns. contg. ***metal*** ***complexes***
 of ***squarylium*** compds. for presensitized plates, visible
 laser recording materials, coatings and adhesives)
 IT 577974-81-3P 612837-77-1P 612837-78-2P
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
 (Reactant or reagent)
 (photopolymerizable compns. contg. ***metal*** ***complexes***
 of ***squarylium*** compds. for presensitized plates, visible
 laser recording materials, coatings and adhesives)
 IT 89-25-8, 1-Phenyl-3-methylpyrazolin-5-one 91-66-7, N,N-Diethylaniline

118-12-7, 1,3,3-Trimethyl-2-methylene indoline 557-34-6, Zinc acetate
2892-63-9, 3,4-Dichloro-3-cyclobuten-1,2-dione 3119-93-5 5222-73-1,
3,4-Dimethoxy-3-cyclobutene-1,2-dione 6872-17-9, 5-Chloro-1,3,3-
trimethyl-2-methylene indoline 7727-43-7, Barium sulfate 15306-17-9,
Aluminumtris(ethylacetoacetate) 23253-51-2, 5-Hydroxy-3-phenylisoxazole
29211-43-6 31272-05-6 35976-46-6, 5-Methoxy-1,3,3-trimethyl-2-
methyleneindoline 612830-88-3

RL: RCT (Reactant); RACT (Reactant or reagent)

(photopolymerizable compns. contg. ***metal*** ***complexes***

of ***squarylium*** compds. for presensitized plates, visible

laser recording materials, coatings and adhesives)

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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- (3) Kyowa Hakko Kogyo Co Ltd; EP 729945 B 1996 CAPLUS
- (4) Kyowa Hakko Kogyo Co Ltd; WO 9609289 A 1996 CAPLUS
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L6 ANSWER 23 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:563681 CAPLUS <<LOGINID::20060727>>

DN 140:249531

ED Entered STN: 24 Jul 2003

TI Symmetric and asymmetric ***squarylium*** dyes as noncovalent protein
labels: a study by fluorimetry and capillary electrophoresis

AU Welder, Frank; Paul, Beverly; Nakazumi, Hiroyuki; Yagi, Shigeyuki; Colyer,
Christa L.

CS Department of Chemistry, Wake Forest University, Winston-Salem, NC, 27109,
USA

SO Journal of Chromatography, B: Analytical Technologies in the Biomedical
and Life Sciences (2003), 793(1), 93-105

CODEN: JCBAAI; ISSN: 1570-0232

PB Elsevier Science B.V.

DT Journal

LA English

CC 9-7 (Biochemical Methods)

AB Noncovalent interactions between two ***squarylium*** dyes and various
model proteins have been explored. NN127 and SQ-3 are sym. and asym.

squarylium dyes, resp., the fluorescence emissions of which have
been shown to be enhanced upon ***complexation*** with proteins such
as bovine serum albumin (BSA), human serum albumin (HSA),

.beta.-lactoglobulin A, and trypsinogen. Although these dyes are poorly
sol. in aq. soln., they can be dissolved first in methanol followed by
diln. with aq. buffer without pptn., and are then suitable for use as
fluorescent labels in protein detn. studies. The nature of interactions
between these dyes and proteins was studied using a variety of buffer
systems, and it was found that electrostatic interactions are involved but
not dominant. Dye/protein stoichiometries in the noncovalent

complexes were found to be 1:1 for SQ-3, although various possible
stoichiometries were found for NN127 depending upon pH and protein.

Assocn. consts. on the order of 10⁵ and 10⁷ were found for noncovalent

complexes of SQ-3 and NN127, resp., with HSA, indicating stronger
interactions of the sym. dye with proteins. Finally, HSA

complexes with NN127 were detd. by capillary electrophoresis with
laser -induced fluorescence detection (CE-LIF). In particular,

NN127 shows promise as a reagent capable of fluorescently labeling analyte
proteins for anal. by CE-LIF without itself being significantly
fluorescent under the aq. soln. conditions studied herein.

ST ***squarylium*** dye protein label fluorimetry capillary
electrophoresis

IT Molecular association

(between fluorescent dyes and proteins; sym. and asym.

squarylium dyes for noncovalent protein labels and studied by
fluorimetry and capillary electrophoresis)

IT Albumins, analysis
 RL: ANT (Analyte); ANST (Analytical study)
 (serum; sym. and asym. ***squarylium*** dyes for noncovalent protein labels and studied by fluorimetry and capillary electrophoresis)

IT Dyes
 (***squarylium*** ; sym. and asym. ***squarylium*** dyes for noncovalent protein labels and studied by fluorimetry and capillary electrophoresis)

IT Onium compounds
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (***squarylium*** ; sym. and asym. ***squarylium*** dyes for noncovalent protein labels and studied by fluorimetry and capillary electrophoresis)

IT Capillary electrophoresis
 Laser fluorometry
 (sym. and asym. ***squarylium*** dyes for noncovalent protein labels and studied by fluorimetry and capillary electrophoresis)

IT Lactoglobulins
 RL: ANT (Analyte); ANST (Analytical study)
 (.beta.-, A; sym. and asym. ***squarylium*** dyes for noncovalent protein labels and studied by fluorimetry and capillary electrophoresis)

IT 9002-08-8, Trypsinogen
 RL: ANT (Analyte); ANST (Analytical study)
 (sym. and asym. ***squarylium*** dyes for noncovalent protein labels and studied by fluorimetry and capillary electrophoresis)

IT 138496-68-1, NN127
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (sym. and asym. ***squarylium*** dyes for noncovalent protein labels and studied by fluorimetry and capillary electrophoresis)

IT 670248-56-3P, SQ 3
 RL: ARG (Analytical reagent use); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
 (sym. and asym. ***squarylium*** dyes for noncovalent protein labels and studied by fluorimetry and capillary electrophoresis)

IT 2892-63-9, 3,4-Dichlorocyclobut-3-ene-1,2-dione 27086-49-3,
 N-Butyl-2-methylbenzothiazolium iodide 38113-78-9
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (sym. and asym. ***squarylium*** dyes for noncovalent protein labels and studied by fluorimetry and capillary electrophoresis)

IT 669707-98-6P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (sym. and asym. ***squarylium*** dyes for noncovalent protein labels and studied by fluorimetry and capillary electrophoresis)

RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L6 ANSWER 24 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2003:452090 CAPLUS <<LOGINID::20060727>>
 DN 139:44275
 ED Entered STN: 13 Jun 2003
 TI Acrylic polymer-based filter for display
 IN Ozawa, Tetsuo; Saito, Yasuyo
 PA Mitsubishi Chemical Corp., Japan
 SO Jpn. Kokai Tokkyo Koho, 24 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM G02B005-22
 ICS C09B047-12; C09B057-00; C09B057-10
 CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 Section cross-reference(s): 73

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003167119	A2	20030613	JP 2001-352850	20011119
PRAI	JP 2000-384633	A	20001219		
	JP 2001-287370	A	20010920		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2003167119	ICM	G02B005-22
	ICS	C09B047-12; C09B057-00; C09B057-10
	IPCI	G02B0005-22 [ICM,7]; C09B0047-12 [ICS,7]; C09B0047-04 [ICS,7,C*]; C09B0057-00 [ICS,7]; C09B0057-10 [ICS,7]
	IPCR	C09B0047-04 [I,C*]; C09B0047-12 [I,A]; C09B0057-00 [I,A]; C09B0057-00 [I,C*]; C09B0057-10 [I,A]; G02B0005-22 [I,A]; G02B0005-22 [I,C*]

OS MARPAT 139:44275

AB The filter has a layer contg. a colorant (e.g., ***squarylium***
 compd., ***metal*** ***complex***, tetraazaporphyrin compd., etc.)
 and an acrylic polymer showing glass transition temp. .gtoreq.110.degree..
 The filter shows good durability and color adjustment without decrease of
 light intensity of a display.

ST acrylic polymer colorant display filter

IT Dyes

Optical filters
 Optical imaging devices

Plasma display panels
 (acrylic polymer-based filter for display)

IT Acrylic polymers, uses

RL: TEM (Technical or engineered material use); USES (Uses)
 (acrylic polymer-based filter for display)

IT 540744-25-0, Optorez OZ 5000 540744-30-7, Optorez OZ 1100

RL: TEM (Technical or engineered material use); USES (Uses)
 (acrylic polymer-based filter for display)

IT 202411-23-2 295328-24-4 375823-53-3 382643-57-4

RL: TEM (Technical or engineered material use); USES (Uses)
 (colorant; acrylic polymer-based filter for display)

L6 ANSWER 25 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:423557 CAPLUS <<LOGINID::20060727>>

DN 139:338461

ED Entered STN: 03 Jun 2003
 TI Donor-acceptor type low band gap polymers: polysquaraines and related systems
 AU Ajayaghosh, Ayyappanpillai
 CS Photosciences and Photonics Division, Regional Research Laboratory (CSIR), Trivandrum, 695 019, India
 SO Chemical Society Reviews (2003), 32(4), 181-191
 CODEN: CSRVBR; ISSN: 0306-0012
 PB Royal Society of Chemistry
 DT Journal; General Review
 LA English
 CC 37-0 (Plastics Manufacture and Processing)
 Section cross-reference(s): 76
 AB A review on recent developments in the area of donor-acceptor type low band gap polymers with special emphasis on polysquaraines. In recent years, considerable effort was directed towards the synthesis of conjugated polymers with low ***optical*** band gaps (Eg), since they show intrinsic elec. cond. One of the approaches towards the designing of such polymers is the use of strong donor and acceptor monomers at regular arrangements in the repeating units, which has limited success in many cases. An alternate strategy is the use of org. dyes, having inherently low HOMO-LUMO sepn., as building blocks. Extension of conjugation in org. dyes is therefore expected to result in oligomers and polymers with near IR absorption, which is a signature of low band gaps. ***Squaraine*** dyes are ideal candidates for this purpose due to their unique ***optical*** properties.
 ST review polysquaraine donor acceptor low band gap polymer synthesis
 IT Polymers, preparation
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (conjugated; synthesis of donor-acceptor type low band gap polymers including polysquaraines)
 IT Band gap
 Electric conductivity
 (of donor-acceptor type low band gap polymers including polysquaraines and review thereon)
 IT Charge transfer ***complexes***
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (synthesis of donor-acceptor type low band gap polymers including polysquaraines)
 IT 109-97-7DP, Pyrrole, derivs., polymer with ***squaraine*** derivs. 78675-98-6DP, ***Squaraine***, derivs., polymer with pyrrole derivs.
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (synthesis of donor-acceptor type low band gap polymers including polysquaraines)

RE.CNT 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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L6 ANSWER 26 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2003:14216 CAPLUS <<LOGINID::20060727>>
 DN 138:80762
 ED Entered STN: 08 Jan 2003
 TI ***laser*** -induced thermal transfer recording materials with good
 images, and recording method using them
 IN Ota, Tomohisa; Konuma, Taro; Maejima, Katsuki; Maehashi, Tatsukazu
 PA Konica Co., Japan
 SO Jpn. Kokai Tokkyo Koho, 36 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM B41M005-40
 ICS B41J002-32; B41M005-26; B41M005-30; C09D011-00; C09B023-00;
 C09B057-00
 CC 74-7 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)

FAN.CNT 1					
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 2003001953	A2	20030108	JP 2001-192691	20010626
PRAI	JP 2001-192691		20010626		

CLASS		
PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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JP 2003001953	ICM	B41M005-40
	ICS	B41J002-32; B41M005-26; B41M005-30; C09D011-00; C09B023-00; C09B057-00
	IPCI	B41M0005-40 [ICM,7]; B41J0002-32 [ICS,7]; B41M0005-26 [ICS,7]; B41M0005-30 [ICS,7]; C09D0011-00 [ICS,7]; C09B0023-00 [ICS,7]; C09B0057-00 [ICS,7]
	IPCR	B41J0002-32 [I,A]; B41J0002-32 [I,C*]; B41M0005-26 [I,A]; B41M0005-26 [I,C*]; B41M0005-30 [I,A]; B41M0005-30 [I,C*]; B41M0005-40 [I,A]; B41M0005-40 [I,C*]; C09B0023-00 [N,A]; C09B0023-00 [N,C*]; C09B0057-00 [N,A]; C09B0057-00 [N,C*]; C09D0011-00 [I,A]; C09D0011-00 [I,C*]

OS MARPAT 138:80762
 AB The recording material, useful for direct digital color proofs, comprises a base sheet, a photothermal conversion layer, a vapor-deposited ***metal*** layer, and an ink layer in this order. The photothermal conversion layers may contain (thio)pyrylium ***squarylium*** dyes, (thio)pyrylium croconium dyes, selenapyrylium ***squarylium*** dyes, selenapyrylium croconium dyes, telluropyrlylium ***squarylium*** dyes, and telluropyrlylium croconium dyes. Damages on transferred images by decompn. of the photothermal conversion layers and/or middle layers are prevented with this invention.
 ST ***laser*** thermal transfer printing color proof; photothermal dye decompn prevention transfer printing; digital printing thermal transfer ***metal*** layer
 IT Thermal-transfer printing
 (***laser*** thermal transfer recording sheets with suppressed photothermal dye decompn.)
 IT Dyes
 (***laser*** ; ***laser*** thermal transfer recording sheets with suppressed photothermal dye decompn.)
 IT Thermal-transfer printing materials
 (sheets; ***laser*** thermal transfer recording sheets with

suppressed photothermal dye decompn.)
IT 16595-48-5 88878-49-3 93072-15-2 123778-78-9 335662-37-8
481055-47-4 481055-48-5 481056-51-3
RL: TEM (Technical or engineered material use); USES (Uses)
(photothermal conversion layer contg.; ***laser*** thermal transfer
recording sheets with suppressed photothermal dye decompn.)
IT 7429-90-5, Aluminum, uses 7440-02-0, Nickel, uses 7440-22-4, Silver,
uses 7440-47-3, Chromium, uses 7440-50-8, Copper, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(vapor-deposited; ***laser*** thermal transfer recording sheets
with suppressed photothermal dye decompn.)

L6 ANSWER 27 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2002:645584 CAPLUS <<LOGINID::20060727>>

DN 138:179829

ED Entered STN: 27 Aug 2002

TI Potassium Sensing by Using a Newly Synthesized ***Squaraine*** Dye in
Sol-Gel Matrix

AU Ertekin, Kadriye; Yeniguel, Berrin; Akkaya, Engin U.

CS Faculty of Science, Department of Chemistry, Ege University, Izmir, 35100,
Turk.

SO Journal of Fluorescence (2002), 12(2), 263-268

CODEN: JOFLEN; ISSN: 1053-0509

PB Kluwer Academic/Plenum Publishers

DT Journal

LA English

CC 79-6 (Inorganic Analytical Chemistry)

AB ***Squaraines*** are a group of fluorescent dyes and pigments derived
from squaric acid and dialkylanilines known in applications such as
photoreceptors, org. solar cells, ***optical*** recording media, and
nonlinear optics. Their very promising spectral properties, long
wavelength absorption and emission, and high absorptivity and quantum
yields were not exploited so far in relation to ***optical*** sensor
design. They exhibit excellent soly. in sol-gel matrixes, and the
ligand is an integral part of the fluorophore .pi. system, which
makes the mol. a fluoroionophore. K-sensing agent, bis[4-N-(1-aza-
4,7,10,13,16-pentaoxacyclooctadecyl)-3,5-dihydroxyphenyl]

squaraine was used for K sensing in a sol-gel matrix. The
spectrofluorometric response of dye-doped tetra-Et orthosilicate (TEOS)
film after exposure to certain concns. of K+ was studied, and 62% of
relative signal change was achieved. The dynamic working range of the
sensor membrane was found between 10-9 and 10-6 M K+, in other terms from
nanomolar to micromolar levels, which is an advantage over flame emission
spectroscopy, in view of detection limit. The sensor is fully reversible
within the dynamic range and the response time (.tau.90) is 2 min under
batch conditions. The cross-sensitivity of the mol. to Na+, Ba2+, Ca2+,
and NH4+ was also tested in sep. solns.

ST potassium sensing ***squaraine*** dye sol gel matrix

IT Fluorometry

Optical sensors
(potassium sensing by using a newly synthesized ***squaraine*** dye
in Sol-gel matrix)

IT 7440-09-7, Potassium, analysis

RL: ANT (Analyte); ANST (Analytical study)

(potassium sensing by using a newly synthesized ***squaraine*** dye
in Sol-gel matrix)

IT 198434-19-4, Bis[4-N-(1-aza-4,7,10,13,16-pentaoxacyclooctadecyl)-3,5-
dihydroxyphenyl] ***squaraine***

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)

(potassium sensing by using a newly synthesized ***squaraine*** dye
in Sol-gel matrix)

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Akkaya, E; Proc NATO ASI Series C V492, P177 CAPLUS

(2) Ambrose, M; Anal Chim Acta 1999, V378, P119

(3) Chan, H; Analyst 1995, V120, P1963

(4) Fielding, A; The Physics and Chemistry of Sol-Gel Processing 1986

(5) Kessler, M; Spectrochim A 1991, V47, P187

(6) McKiernan, J; J Phys Chem 1990, V94, P5654

(7) Nakamura, M; J Non-Cryst Solids 1991, V135, P1 CAPLUS

(8) Oguz, U; Tetrahedron Lett 1998, V39, P5857 CAPLUS

(9) Shortreed, M; Anal Chem 1996, V68, P2656 CAPLUS

- (10) Toth, K; Anal Chim Acta 1997, V353, P1 CAPLUS
 (11) Wang, E; Anal Chem 1995, V67, P522 CAPLUS
 (12) Wang, E; Anal Chim Acta 1997, V357, P85 CAPLUS
 (13) Wolfbeis, O; Anal Chim Acta 1987, V198, P1 CAPLUS

L6 ANSWER 28 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2002:487670 CAPLUS <<LOGINID::20060727>>
 DN 137:70548
 ED Entered STN: 28 Jun 2002
 TI ***Metal*** ***complex*** -type ***squarylium*** compounds and
 rewritable ***optical*** recording media made by using the same
 IN Shimizu, Ikuo; Toyoda, Hiroshi; Kinugasa, Motoharu; Yamada, Shiho;
 Noguchi, Soh; Satoh, Tsutomu; Tomura, Tatsuya
 PA Kyowa Hakko Kogyo Co., Ltd., Japan; Kyowa Yuka Co., Ltd.; Ricoh Company,
 Ltd.
 SO PCT Int. Appl., 57 pp.
 CODEN: PIXXD2
 DT Patent
 LA Japanese
 IC ICM C09B023-00
 ICS B41M005-26; G11B007-24
 CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 Section cross-reference(s): 41, 73

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002050190	A1	20020627	WO 2001-JP11116	20011219
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	CA 2400181	AA	20020627	CA 2001-2400181	20011219
	AU 2002017451	A5	20020701	AU 2002-17451	20011219
	EP 1334998	A1	20030813	EP 2001-271415	20011219
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
	TW 588090	B	20040521	TW 2001-90131711	20011220
	US 2003187272	A1	20031002	US 2002-203409	20021127
	US 6660867	B2	20031209		
PRAI	JP 2000-387192	A	20001220		
	WO 2001-JP11116	W	20011219		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2002050190	ICM	C09B023-00
	ICS	B41M005-26; G11B007-24
	IPCI	C09B0023-00 [ICM,7]; B41M0005-26 [ICS,7]; G11B0007-24 [ICS,7]
	IPCR	C09B0057-00 [I,A]; C09B0057-00 [I,C*]; C09B0057-10 [I,A]; G11B0007-007 [N,A]; G11B0007-007 [N,C*]; G11B0007-24 [I,C*]; G11B0007-249 [I,A]
	ECLA	C09B057/00S; C09B057/10; G11B007/249
CA 2400181	IPCI	C09B0023-00 [ICM,7]; G11B0007-24 [ICS,7]; B41M0005-26 [ICS,7]
	ECLA	C09B057/00S; C09B057/10; G11B007/249
AU 2002017451	IPCI	C09B0023-00 [ICM,7]; B41M0005-26 [ICS,7]; G11B0007-24 [ICS,7]
	IPCR	C09B0057-00 [I,A]; C09B0057-00 [I,C*]; C09B0057-10 [I,A]; G11B0007-007 [N,A]; G11B0007-007 [N,C*]; G11B0007-24 [I,C*]; G11B0007-249 [I,A]
EP 1334998	IPCI	C09B0023-00 [ICM,7]; B41M0005-26 [ICS,7]; G11B0007-24 [ICS,7]
	IPCR	C09B0057-00 [I,A]; C09B0057-00 [I,C*]; C09B0057-10 [I,A]; G11B0007-007 [N,A]; G11B0007-007 [N,C*]; G11B0007-24 [I,C*]; G11B0007-249 [I,A]
	ECLA	C09B057/00S; C09B057/10; G11B007/249

TW 588090 IPCI C09B0023-00 [ICM,7]; B41M0005-26 [ICS,7]; G11B0007-24 [ICS,7]
 US 2003187272 IPCI G11B0007-24 [ICM,7]; C07F0005-06 [ICS,7]; C07F0005-00 [ICS,7,C*]
 IPCR C09B0057-00 [I,A]; C09B0057-00 [I,C*]; C09B0057-10 [I,A]; G11B0007-007 [N,A]; G11B0007-007 [N,C*]; G11B0007-24 [I,C*]; G11B0007-249 [I,A]
 NCL 548/101.000
 ECLA C09B057/00S; C09B057/10; G11B007/249
 OS MARPAT 137:70548
 GI

/ Structure 22 in file .gra /

AB The invention provides materials having spectral characteristics, light resistance, soly. and thermal decompn. characteristics suitable for DVD-R recording, more specifically, ***squarylium*** - ***metal***
 complexes represented by I (R1,2 = alkyl, aralkyl, aryl, or heterocyclic group; Q = ***metal*** atom having ability to coordinate such as ***Al***; q = 2 or A = aryl, heterocyclic group, or Y=CH-; Y = aryl or heterocyclic group). The max. ***optical*** absorption of the ***metal*** ***complex*** ***squarylium*** compd. dissolved in chloroform is 550-600 nm, and the mol extinction coeff. at the max absorption wavelength, log .epsilon., is .gtoreq.5. The ***information*** reproducing wavelength is 600-700 nm. The rewritable ***optical*** recording medium contains a ***metal*** ***complex*** - or amine-based photostabilizer.
 ST ***metal*** aluminum ***squarylium*** compd rewritable
 optical recording medium; amine photostabilizer rewritable
 IT ***optical*** recording medium
 IT ***Optical*** recording materials
 (erasable; ***metal*** ***squarylium*** ***complex*** for rewritable ***optical*** recording medium)
 IT Onium compounds
 RL: TEM (Technical or engineered material use); USES (Uses)
 (***squarylium***; rewritable ***optical*** recording medium contg.)
 IT 86-92-0 89-25-8 90-31-3 118-12-7, 1,3,3-Trimethyl-2-methyleneindoline 321-07-3 2749-59-9 4845-49-2 5222-73-1 6872-17-9, 5-Chloro-1,3,3-trimethyl-2-methyleneindoline 13024-90-3 20124-80-5 29211-43-6 31272-04-5 31272-05-6 35976-46-6, 5-Methoxy-1,3,3-trimethyl-2-methyleneindoline 39578-87-5, 1,3,3,5-Tetramethyl-2-methyleneindoline 54683-96-4 60798-11-0 62783-93-1, 5-Bromo-1,3,3-trimethyl-2-methyleneindoline 64123-72-4 99567-90-5 118048-80-9 118048-83-2 118049-03-9 184707-90-2 439289-89-1 439289-90-4 439289-91-5
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (***metal*** ***squarylium*** ***complex*** for rewritable ***optical*** recording medium)
 IT 439591-71-6P 439591-72-7P 439591-73-8P 439591-74-9P 439591-75-0P 439591-76-1P 439591-77-2P 439591-78-3P 439591-79-4P 439591-80-7P 439591-81-8P 439591-82-9P 439591-83-0P 439591-84-1P 439591-85-2P 439591-86-3P 439591-87-4P 439591-88-5P 439591-89-6P 439591-90-9P 439591-91-0P 439591-92-1P 439591-93-2P 439591-94-3P 439591-95-4P 439591-96-5P 439591-97-6P 439591-98-7P 439591-99-8P 439592-00-4P 439592-01-5P 439592-02-6P 439592-03-7P 439592-04-8P 439592-05-9P 439592-06-0P
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (***metal*** ***squarylium*** ***complex*** for rewritable ***optical*** recording medium)
 IT 23507-22-4 87314-12-3 227190-73-0 439610-73-8
 RL: TEM (Technical or engineered material use); USES (Uses)
 (photostabilizer; rewritable ***optical*** recording medium contg.)
 RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE
 (1) Konica Corp; JP 2000345059 A 2000 CAPLUS
 (2) Kyowa Hakko Kogyo Co Ltd; WO 0144233 A1 2001 CAPLUS
 (3) Kyowa Hakko Kogyo Co Ltd; EP 1152001 A1 2001 CAPLUS
 (4) Ricoh Co Ltd; JP 200123235 A 2001

L6 ANSWER 29 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2002:292137 CAPLUS <<LOGINID::20060727>>
 DN 136:332836
 ED Entered STN: 19 Apr 2002
 TI Optic recording medium for rewritable DVD new format
 IN Tomura, Tatsuya; Noguchi, Takashi; Sasa, Noboru; Sato, Tsutomu; Ueno,
 Yasunobu; Azuma, Yasuhiro
 PA Ricoh Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 14 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM G11B007-24
 ICS G11B007-24; B41M005-26
 CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 Section cross-reference(s): 41

FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002117589	A2	20020419	JP 2000-306809	20001005
	US 2002048646	A1	20020425	US 2001-925425	20010809
	US 6741547	B2	20040525		
PRAI	JP 2000-243157	A	20000810		
	JP 2000-270833	A	20000906		
	JP 2000-306808	A	20001005		
	JP 2000-306809	A	20001005		
	JP 2000-306810	A	20001005		
	JP 2001-17483	A	20010125		
	JP 2001-28845	A	20010205		
	JP 2001-84738	A	20010323		
	JP 2001-97847	A	20010330		
	JP 2001-99870	A	20010330		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2002117589	ICM	G11B007-24
	ICS	G11B007-24; B41M005-26
	IPCI	G11B0007-24 [ICM,7]; G11B0007-24 [ICS,7]; B41M0005-26 [ICS,7]
	IPCR	B41M0005-26 [I,A]; B41M0005-26 [I,C*]; G11B0007-24 [I,A]; G11B0007-24 [I,C*]
US 2002048646	IPCI	B32B0003-02 [ICM,7]
	IPCR	B32B0003-02 [I,A]; B32B0003-02 [I,C*]; G11B0007-00 [I,C*]; G11B0007-0045 [I,A]; G11B0007-007 [I,A]; G11B0007-007 [I,C*]; G11B0007-125 [I,A]; G11B0007-125 [I,C*]; G11B0007-24 [I,C*]; G11B0007-244 [I,A]; G11B0007-247 [I,A]; G11B0007-26 [I,A]; G11B0007-26 [I,C*]; G11B0027-19 [I,A]; G11B0027-19 [I,C*]; G11B0027-24 [I,A]; G11B0027-30 [N,A]; G11B0027-30 [N,C*]
	NCL	428/064.400
	ECLA	B32B003/02; G11B007/0045R; G11B007/007; G11B007/125C; G11B007/24B3F; G11B007/244; G11B007/247; G11B007/26P; G11B027/19; G11B027/24

AB The ***optical*** recording medium comprises a recording layer and a reflecting layer on a substrate, wherein (1) the substrate has a wobble 4T-96T, (2) the recording layer has a refractive index 1.5.ltoreq.n.ltoreq.3.0 for .+-.5 nm wavelength range and has an org. dye film with an extinction coeff. 0.02.ltoreq.k.ltoreq.0.2, and (3) the wobble frequency (m) and a groove depth of the substrate(dl) have a relation 4,000.ltoreq.(dl .times. m).ltoreq.240,000. The recording layer contains a ***metal*** dye, a polymethine dye, a ***squarylium*** dye, and/or an azaazulene dye. Or, the recording layer contains an azo ***metal*** dye, a formazan ***metal*** dye, and/or a dipyrromethene ***metal*** dye.

ST optic recording medium rewritable DVD
 IT ***Optical*** disks
 (Optic recording medium for rewritable DVD new format)
 IT 7440-02-0D, Nickel, ***complexes*** with azo compds. 7440-50-8D,

Copper, ***complexes*** with azo compds. 412917-96-5D, nickel
 complexes 412917-98-7 412917-99-8D, nickel ***complexes***
 412918-01-5 412918-02-6D, copper ***complexes*** 413579-02-9
 RL: DEV (Device component use); USES (Uses)
 (Optic recording medium for rewritable DVD new format)

L6 ANSWER 30 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2002:25052 CAPLUS <<LOGINID::20060727>>
 DN 136:233494
 ED Entered STN: 10 Jan 2002
 TI Review of near-infrared ***laser*** protective dyes
 AU Yang, Xiao-Bing; Ding, Song-Tao; Yang, Yu-Sheng; Zhou, Xiao-Hai
 CS Research Institute of Chemical Defense, Beijing, 100083, Peop. Rep. China
 SO Youji Huaxue (2002), 22(1), 33-41
 CODEN: YCHHDX; ISSN: 0253-2786
 PB Kexue Chubanshe
 DT Journal; General Review
 LA Chinese
 CC 41-0 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic
 Sensitizers)
 AB A review. Due to the requirement of near-IR ***laser*** protective
 dyes and ***laser*** stealth materials, this review focused on the
 research progress of near-IR absorbing dyes, and some suggestions were put
 forward on the future research. Some of the most important tech.
 requirements for ***laser*** -protective dyes within the plastic are as
 follows: sharp absorption bands at specific wavelengths corresponding to
 laser emission, excellent lightfastness, robust thermal and chem.
 stability, stability to ambient conditions, high ***optical*** d. and
 scotopic luminous transmission, good soly. in plastic and low toxicity.
 This review paid attention to the properties such as the max. absorption
 wavelength and the absorption intense, attention had been directed towards
 eight types near-IR dyes: cyanine dyes which included polymethine dyes and
 squarylium or croconium dyes, phthalocyanines and
 naphthalocyanines, ***metal*** ***complex*** dyes, quinone dyes,
 azo dyes, radical dyes, multiphenylmethane dyes and perylene dyes. Other
 kinds of near-IR dyes were also mentioned, such as arom. annulenes, planes
 contg. so-called nonbenzenoid arom. rings, cyclic cross-conjugated
 hydrocarbons having inserted p-quinoid ring, fluorenylium dyes with inorg.
 anions, donor-acceptor cyclophanes, tetrapyrazinoporphyrazines and
 pentaazadentate expanded porphyrins et ***al***. All of the dyes
 mentioned above had some good properties for use as the near-IR
 laser protective dyes and ***laser*** stealth materials, but
 there also existed defects in every kind of dyes.
 ST review near IR ***laser*** protective dye
 IT Dyes
 (***laser*** ; near-IR ***laser*** protective dyes)
 IT IR ***lasers***
 (near-IR; near-IR ***laser*** protective dyes)

L6 ANSWER 31 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2001:881855 CAPLUS <<LOGINID::20060727>>
 DN 136:29193
 ED Entered STN: 07 Dec 2001
 TI Photoimaging materials containing photosensitive microcapsules with
 excellent image reproducibility
 IN Ito, Akira; Ibaraki, Kazuhiko
 PA Mitsubishi Paper Mills, Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 11 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM G03F007-004
 ICS G03F007-004; G03F007-028; G03F007-029; C09B011-28; C09B023-00
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001337449	A2	20011207	JP 2000-307458	20001006
PRAI	JP 2000-83795	A	20000324		

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

JP 2001337449 ICM G03F007-004
 ICS G03F007-004; G03F007-028; G03F007-029; C09B011-28;
 C09B023-00
 IPCI G03F0007-004 [ICM,7]; G03F0007-004 [ICS,7];
 G03F0007-028 [ICS,7]; G03F0007-029 [ICS,7]; C09B0011-28
 [ICS,7]; C09B0011-00 [ICS,7,C*]; C09B0023-00 [ICS,7]
 IPCR C09B0011-00 [N,C*]; C09B0011-28 [N,A]; C09B0023-00
 [N,A]; C09B0023-00 [N,C*]; G03F0007-004 [I,A];
 G03F0007-004 [I,C*]; G03F0007-028 [I,A]; G03F0007-028
 [I,C*]; G03F0007-029 [I,A]; G03F0007-029 [I,C*]

AB The material contains microcapsules contg. (A) a coloring material having
 a max. spectral absorption in a visible light region, (B) a polymerizable
 monomer, (C) a photopolymer. initiator, and (D) a spectral sensitizing dyes
 being photobleachable by the interaction with C, on a support, wherein
 max. absorption difference between A and D is .gtoreq.50 nm. The material
 may contain decoloration accelerators, preferably arom. carbonyl compds.
 or onium salts. The initiators may be Fe-arene ***complexes*** and
 the dyes may be selected from ***squarylium*** dyes, cyanine dyes, and
 triarylmethane dyes.

ST photosensitive microcapsule ***optical*** recording image
 reproducibility; photobleaching ***squarylium*** sensitizer dye
 spectral absorption; onium decoloration accelerator transfer printing
 sheet

IT Carbonyl compounds (organic), uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (arom., decoloration accelerator; transfer printing sheets having
 photosensitive microcapsule layers contg. photobleachable spectral
 sensitizing dyes with good image reproducibility)

IT Onium compounds
 RL: TEM (Technical or engineered material use); USES (Uses)
 (decoloration accelerator; transfer printing sheets having
 photosensitive microcapsule layers contg. photobleachable spectral
 sensitizing dyes with good image reproducibility)

IT Photoimaging materials
 (photopolymerizable; transfer printing sheets having photosensitive
 microcapsule layers contg. photobleachable spectral sensitizing dyes
 with good image reproducibility)

IT Dyes
 (photosensitizing; transfer printing sheets having photosensitive
 microcapsule layers contg. photobleachable spectral sensitizing dyes
 with good image reproducibility)

IT Cyanine dyes
 (sensitizer; transfer printing sheets having photosensitive
 microcapsule layers contg. photobleachable spectral sensitizing dyes
 with good image reproducibility)

IT Onium compounds
 RL: TEM (Technical or engineered material use); USES (Uses)
 (***squarylium*** , sensitizer; transfer printing sheets having
 photosensitive microcapsule layers contg. photobleachable spectral
 sensitizing dyes with good image reproducibility)

IT Decolorizing agents
 Microcapsules
 Transfer printing
 (transfer printing sheets having photosensitive microcapsule layers
 contg. photobleachable spectral sensitizing dyes with good image
 reproducibility)

IT 6359-17-7 123778-77-8
 RL: TEM (Technical or engineered material use); USES (Uses)
 (sensitizing dye; transfer printing sheets having photosensitive
 microcapsule layers contg. photobleachable spectral sensitizing dyes
 with good image reproducibility)

IT 32760-80-8, Irgacure 261
 RL: CAT (Catalyst use); USES (Uses)
 (transfer printing sheets having photosensitive microcapsule layers
 contg. photobleachable spectral sensitizing dyes with good image
 reproducibility)

IT 147-14-8, C.I. Pigment Blue 15:3 4986-89-4, Pentaerythritol
 tetraacrylate 29570-58-9, Dipentaerythritol hexaacrylate 99402-80-9,
 C.I. Pigment Red 184
 RL: TEM (Technical or engineered material use); USES (Uses)
 (transfer printing sheets having photosensitive microcapsule layers

contg. photobleachable spectral sensitizing dyes with good image reproducibility)

L6 ANSWER 32 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2001:676354 CAPLUS <<LOGINID::20060727>>
DN 135:233963
ED Entered STN: 14 Sep 2001
TI ***Optical*** recording medium and ***optical*** recording and
reading method using the same
IN Noguchi, Soh; Satoh, Tsutomu; Tomura, Tatsuya; Sasa, Noboru; Ueno,
Yasunobu; Higashi, Yasuhiro; Shimizu, Ikuo Yokkaichi Research
Laboratories; Toyoda, Hiroshi Yokkaichi Research Laboratories; Kinugasa,
Motoharu Yokkaichi Research Labs.; Yamada, Shiho; Ikuta, Masanori
Yokkaichi Research Laboratories; Mutoh, Kenji
PA Ricoh Company, Ltd., Japan; Kyowa Hakko Kogyo Co., Ltd.; Kyowa Yuka Co.,
Ltd.
SO Eur. Pat. Appl., 40 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM G11B007-24
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1132902	A1	20010912	EP 2001-105270	20010305
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2001322356	A2	20011120	JP 2001-36663	20010214
	JP 2002234259	A2	20020820	JP 2001-36632	20010214
	US 2001044001	A1	20011122	US 2001-798565	20010302
	US 6558768	B2	20030506		
PRAI	JP 2000-62437	A	20000307		
	JP 2001-36632	A	20010214		
	JP 2001-36663	A	20010214		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 1132902	ICM	G11B007-24
	IPCI	G11B0007-24 [ICM,6]
	IPCR	G11B0007-24 [N,A]; G11B0007-24 [I,C*]; G11B0007-249 [I,A]
	ECLA	G11B007/249
JP 2001322356	IPCI	B41M0005-26 [ICM,7]; C09B0023-00 [ICS,7]; C09B0045-00 [ICS,7]; G11B0007-24 [ICS,7]
	IPCR	B41M0005-26 [I,A]; B41M0005-26 [I,C*]; C09B0023-00 [I,A]; C09B0023-00 [I,C*]; C09B0045-00 [I,A]; C09B0045-00 [I,C*]; G11B0007-24 [I,A]; G11B0007-24 [I,C*]
JP 2002234259	IPCI	B41M0005-26 [ICM,7]; B32B0009-00 [ICS,7]; B32B0015-08 [ICS,7]; B32B0015-20 [ICS,7]; C07D0455-04 [ICS,7]; C07D0455-00 [ICS,7,C*]; C07D0487-04 [ICS,7]; C07D0487-00 [ICS,7,C*]; C09B0023-00 [ICS,7]; C09B0045-00 [ICS,7]; C09B0045-14 [ICS,7]; C09B0045-18 [ICS,7]; C09B0045-20 [ICS,7]; C09B0045-22 [ICS,7]; C09B0057-00 [ICS,7]; G11B0007-0045 [ICS,7]; G11B0007-00 [ICS,7,C*]; G11B0007-24 [ICS,7]; C07D0209-14 [ICS,7]; C07D0209-88 [ICS,7]; C07D0209-00 [ICS,7,C*]; C07D0401-12 [ICS,7]; C07D0401-00 [ICS,7,C*]; C07D0403-08 [ICS,7]; C07D0403-00 [ICS,7,C*]; C07D0417-12 [ICS,7]; C07D0417-00 [ICS,7,C*]
	IPCR	B32B0009-00 [I,A]; B32B0009-00 [I,C*]; B32B0015-08 [I,A]; B32B0015-08 [I,C*]; B32B0015-20 [I,A]; B32B0015-20 [I,C*]; B41M0005-26 [I,A]; B41M0005-26 [I,C*]; C07D0209-00 [N,C*]; C07D0209-14 [N,A]; C07D0209-88 [N,A]; C07D0401-00 [N,C*]; C07D0401-12 [N,A]; C07D0403-00 [N,C*]; C07D0403-08 [N,A]; C07D0417-00 [N,C*]; C07D0417-12 [N,A]; C07D0455-00 [I,C*]; C07D0455-04 [I,A]; C07D0487-00 [I,C*]; C07D0487-04 [I,A]; C09B0023-00 [I,A]; C09B0023-00 [I,C*]; C09B0045-00 [I,A]; C09B0045-00 [I,C*];

C09B0045-14 [I,A]; C09B0045-18 [I,A]; C09B0045-20
[I,A]; C09B0045-22 [I,A]; C09B0057-00 [I,A];
C09B0057-00 [I,C*]; G11B0007-00 [I,C*]; G11B0007-0045
[I,A]; G11B0007-24 [I,A]; G11B0007-24 [I,C*]
US 2001044001 IPCI B32B0003-02 [ICM,7]
IPCR G11B0007-24 [N,A]; G11B0007-24 [I,C*]; G11B0007-249
[I,A]
NCL 428/064.400
ECLA G11B007/249
OS MARPAT 135:233963
GI

/ Structure 23 in file .gra /

AB The invention relates to an ***optical*** recording medium with a
large capacity for storing data, capable of recording and reading
information using short wavelength light and an ***optical***
recording and reading method using this ***optical*** recording
medium. The ***optical*** recording medium has a substrate and a
recording layer formed thereon, the recording layer contg. .gtoreq.1
squarylium compd. and 1 azo ***metal*** ***chelate***
compd. including an azo moiety (I) or (II) where A, B are a residue for
forming an arom. ring, A' is a residue for forming a heterocyclic ring,
and X represents a substituent having an active hydrogen group. Writing
and reading steps are performed by the application of a semiconductor
laser beam with a wavelength at 600-720 nm.
ST ***optical*** recording reading ***squarylium*** dye azo
metal ***chelate***
IT ***Optical*** disks
(***optical*** recording medium having recording layer contg.
squarylium dye and azo ***metal*** ***chelate***)
IT ***Chelates***
RL: DEV (Device component use); IMF (Industrial manufacture); TEM
(Technical or engineered material use); PREP (Preparation); USES (Uses)
(***optical*** recording medium having recording layer contg.
squarylium dye and azo ***metal*** ***chelate***)
IT Dyes
(***squarylium*** ; ***optical*** recording medium having
recording layer contg. ***squarylium*** dye and azo ***metal***
chelate)
IT 359773-25-4P 359773-26-5P 359773-27-6P 359773-28-7P 359773-29-8P
359773-30-1P 359773-31-2P 359773-32-3P 359773-33-4P 359773-34-5P
359773-35-6P 359773-36-7P 359773-37-8P 359773-38-9P 359773-39-0P
359773-40-3P 359773-41-4P 359773-42-5P
RL: DEV (Device component use); IMF (Industrial manufacture); TEM
(Technical or engineered material use); PREP (Preparation); USES (Uses)
(***optical*** recording medium having recording layer contg. azo
metal ***chelate***)
IT 344933-91-1P 344933-99-9P 344934-03-8P 345232-93-1P 345232-96-4P
345232-98-6P 345233-03-6P 345233-05-8P 359773-79-8P 359773-80-1P
359773-81-2P 359773-82-3P 359773-83-4P 359773-84-5P 359773-85-6P
RL: DEV (Device component use); IMF (Industrial manufacture); TEM
(Technical or engineered material use); PREP (Preparation); USES (Uses)
(***optical*** recording medium having recording layer contg.
squarylium dye)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Mitsubishi Chem Corp; EP 0844243 A 1998 CAPLUS
- (2) Mitsui Chemicals Inc; EP 0881636 A 1998 CAPLUS
- (3) Ricoh Kk; EP 0981132 A 2000 CAPLUS
- (4) Sasa, N; US 5939163 A 1999
- (5) Tdk Corp; EP 0887202 A 1998 CAPLUS

L6 ANSWER 33 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2000:790686 CAPLUS <<LOGINID::20060727>>

DN 133:331759

ED Entered STN: 10 Nov 2000

TI Method for detecting biological agents

IN Chen, Liaohai; Mcbranch, Duncan W.; Wang, Hsing-Lin; Whitten, David G.

PA The Regents of the University of California, USA

SO PCT Int. Appl., 38 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM C12Q001-68
 ICS C12Q001-70; G01N021-64; G01N033-00; G01N033-53; G01N033-531;
 G01N033-533; G01N033-543; C07H021-02; C07H021-04; C12N015-00;
 B05D001-18; B01J013-00
 CC 9-1 (Biochemical Methods)
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000066790	A1	20001109	WO 2000-US12423	20000504
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZW				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	CA 2340905	AA	20001109	CA 2000-2340905	20000504
	EP 1097242	A1	20010509	EP 2000-928892	20000504
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	US 6589731	B1	20030708	US 2000-565589	20000504
	AU 782254	B2	20050714	AU 2000-47058	20000504
	IL 141383	A1	20051120	IL 2000-141383	20000504
PRAI	US 1999-132556P	P	19990505		
	WO 2000-US12423	W	20000504		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2000066790	ICM	C12Q001-68
	ICS	C12Q001-70; G01N021-64; G01N033-00; G01N033-53; G01N033-531; G01N033-533; G01N033-543; C07H021-02; C07H021-04; C12N015-00; B05D001-18; B01J013-00
	IPCI	C12Q0001-68 [ICM,7]; C12Q0001-70 [ICS,7]; G01N0021-64 [ICS,7]; G01N0033-00 [ICS,7]; G01N0033-53 [ICS,7]; G01N0033-531 [ICS,7]; G01N0033-533 [ICS,7]; G01N0033-543 [ICS,7]; C07H0021-02 [ICS,7]; C07H0021-04 [ICS,7]; C07H0021-00 [ICS,7,C*]; C12N0015-00 [ICS,7]; B05D0001-18 [ICS,7]; B01J0013-00 [ICS,7]
	IPCR	G01N0033-543 [I,A]; G01N0033-543 [I,C*]
CA 2340905	ECLA	G01N033/542; G01N033/543K2; G01N033/543K4
	IPCI	C12Q0001-68 [ICM,7]; B01J0013-00 [ICS,7]; C12N0015-00 [ICS,7]; G01N0033-00 [ICS,7]; C07H0021-02 [ICS,7]; C07H0021-04 [ICS,7]; C07H0021-00 [ICS,7,C*]; B05D0001-18 [ICS,7]; G01N0033-53 [ICS,7]; G01N0033-531 [ICS,7]; G01N0033-533 [ICS,7]; G01N0033-543 [ICS,7]; G01N0021-64 [ICS,7]; C12Q0001-70 [ICS,7]
	IPCR	G01N0033-543 [I,A]; G01N0033-543 [I,C*]
	ECLA	G01N033/542; G01N033/543K2; G01N033/543K4
EP 1097242	IPCI	C12Q0001-68 [ICM,6]; C12Q0001-70 [ICS,6]; G01N0021-64 [ICS,6]; G01N0033-00 [ICS,6]; G01N0033-53 [ICS,6]; G01N0033-531 [ICS,6]; G01N0033-533 [ICS,6]; C07H0021-02 [ICS,6]; C07H0021-04 [ICS,6]; C07H0021-00 [ICS,6,C*]; C12N0015-00 [ICS,6]; B05D0001-18 [ICS,6]; B01J0013-00 [ICS,6]
	IPCR	G01N0033-543 [I,A]; G01N0033-543 [I,C*]
US 6589731	IPCI	G01N0033-53 [ICM,7]; G01N0033-543 [ICS,7]
	IPCR	G01N0033-543 [I,A]; G01N0033-543 [I,C*]
	NCL	435/005.000; 422/068.100; 422/082.010; 422/082.020; 422/082.050; 422/082.080; 435/004.000; 435/006.000; 435/007.100; 435/007.900; 435/174.000; 435/176.000; 435/177.000; 435/180.000; 435/181.000; 435/287.100; 435/287.200; 435/808.000; 435/966.000; 436/172.000; 436/501.000; 436/504.000; 436/518.000; 436/524.000; 436/528.000; 436/529.000; 436/805.000; 436/806.000; 436/808.000; 436/823.000
AU 782254	IPCI	C12Q0001-68 [ICM,7]; B01J0013-00 [ICS,7]; B05D0001-18 [ICS,7]; C07H0021-02 [ICS,7]; C07H0021-04 [ICS,7];

C07H0021-00 [ICS,7,C*]; C12N0015-00 [ICS,7];
 C12Q0001-70 [ICS,7]; G01N0021-64 [ICS,7]; G01N0033-00
 [ICS,7]; G01N0033-53 [ICS,7]; G01N0033-531 [ICS,7];
 G01N0033-533 [ICS,7]; G01N0033-543 [ICS,7]
 IPCR G01N0033-543 [I,A]; G01N0033-543 [I,C*]
 ECLA G01N033/542; G01N033/543K2; G01N033/543K4
 IL 141383 IPCI C12Q0001-68 [ICS,7]; C12Q0001-70 [ICS,7]; G01N0021-64
 [ICS,7]; G01N0033-53 [ICS,7]
 IPCR G01N0033-543 [I,C*]; G01N0033-543 [I,A]
 ECLA G01N033/542; G01N033/543K2; G01N033/543K4
 AB A sensor is provided including a polymer capable of having an alterable
 measurable property from the group of luminescence and elec. cond., the
 polymer having an intermediate combination of a recognition element, a
 tethering element and a property-altering element bound thereto and
 capable of altering the measurable property, the intermediate combination
 adapted for subsequent sepn. from the polymer upon exposure to an agent
 having an affinity for binding to the recognition element whereupon the
 sepn. of the intermediate combination from the polymer results in a
 detectable change in the alterable measurable property, and, a means of
 detecting said detectable change in the alterable measurable property.
 ST detecting biol agent
 IT Atoms
 (Divalent; method for detecting biol. agents)
 IT Gels
 (Micro porous; method for detecting biol. agents)
 IT Polyanilines
 RL: DEV (Device component use); USES (Uses)
 (and derivs.; method for detecting biol. agents)
 IT ***Ligands***
 RL: DEV (Device component use); USES (Uses)
 (chem.; method for detecting biol. agents)
 IT Polymers, uses
 RL: DEV (Device component use); USES (Uses)
 (conjugated; method for detecting biol. agents)
 IT Immunoglobulins
 RL: DEV (Device component use); USES (Uses)
 (fragments; method for detecting biol. agents)
 IT Affinity
 Bacteria (Eubacteria)
 Biosensors
 Cell
 Dissolution
 Electric conductivity
 Energy transfer
 Fluorescence
 Fluorescent dyes
 Fluorometry
 Luminescence
 Luminescence spectroscopy
 Microorganism
 Optical fibers
 Polyelectrolytes
 Sensors
 Separation
 Solutions
 Test kits
 Virus
 (method for detecting biol. agents)
 IT Antibodies
 Antigens
 Coordination compounds
 Enzymes, uses
 Glycolipids
 Nucleic acids
 Oligonucleotides
 Peptide nucleic acids
 Plastics, uses
 Poly(arylenealkenylenes)
 Polyacetylenes, uses
 Polydiacetylenes
 Polymers, uses
 Polysaccharides, uses

Proteins, general, uses
 Toxins
 RL: DEV (Device component use); USES (Uses)
 (method for detecting biol. agents)

IT Fluorescent substances
 (polymers; method for detecting biol. agents)

IT Peptides, uses
 RL: DEV (Device component use); USES (Uses)
 (polypeptides; method for detecting biol. agents)

IT 229010-56-4, Single bond
 RL: ANT (Analyte); ANST (Analytical study)
 (method for detecting biol. agents)

IT 58-85-5, Biotin 71-00-1D, Histidine, copper ***complex***
 1910-42-5, Methyl viologen 7440-50-8D, Copper, histidine ***complex***
 , uses 9033-83-4, Polyphenylene 9055-67-8D, Poly(ADP-ribose)
 polymerase, DNA-binding domain 25067-54-3, Polyfuran 25067-54-3D,
 Polyfuran, derivs. 25067-58-7, Polyacetylene 25067-59-8, Polyvinyl
 carbazole 25067-59-8D, Polyvinyl carbazole, derivs. 25233-30-1,
 Polyaniline 25233-30-1D, Polyaniline, derivs. 25233-34-5,
 Polythiophene 26009-24-5, Poly(p-phenylene vinylene) 30604-81-0,
 Polypyrrole 30604-81-0D, Polypyrrole, derivs. 37758-47-7, Ganglioside
 GM1 78675-98-6, ***Squaraine*** 96638-49-2, Poly(phenylene
 vinylene) 96638-49-2D, Poly(phenylene vinylene), derivs. 103419-76-7,
 Poly(1,4-naphthalenediyl-1,2-ethenediyl) 125714-86-5 164658-06-4,
 Poly(2,5-pyridinediyl-1,2-ethenediyl) 189145-97-9, Poly(pyridinediyl-1,2-
 ethenediyl)
 RL: DEV (Device component use); USES (Uses)
 (method for detecting biol. agents)

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD

- RE
- (1) Chen, L; Proceedings of the National Academy of Science 1999, V96(22), P12287 CAPLUS
 - (2) Cubicciotti; US 5656739 A 1997 CAPLUS
 - (3) Cubicciotti; US 5739305 A 1998 CAPLUS
 - (4) Dattagupta; US 4724202 A 1998 CAPLUS
 - (5) Hawa; WO 9913993 A1 1999 CAPLUS
 - (6) Molecular Machines Inc; WO 9960169 A1 1999 CAPLUS
 - (7) Rathbone, D; Tetrahedron Letters 2000, V41, P123 CAPLUS
 - (8) Research Corporation Technologies Inc; WO 9641173 A1 1996 CAPLUS
 - (9) Suarez-Rodriguez, J; Analytica Chimica Acta 2000, V405, P67 CAPLUS

L6 ANSWER 34 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2000:608622 CAPLUS <<LOGINID::20060727>>
 DN 133:205084
 ED Entered STN: 01 Sep 2000
 TI In vivo method of measuring kidney or liver function with fluorescent dye
 clearance
 IN Dorshow, Richard Bradley; Achilefu, Samuel; Rajagopalan, Raghavan; Bugaj,
 Joseph Edward
 PA Mallinckrodt Inc., USA
 SO PCT Int. Appl., 52 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM A61K049-00
 CC 9-5 (Biochemical Methods)
 Section cross-reference(s): 13, 14

FAN.CNT 4

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000050093	A1	20000831	WO 2000-US1322	20000120
W: CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 6228344	B1	20010508	US 1999-258148	19990226
CA 2360421	AA	20000831	CA 2000-2360421	20000120
EP 1154802	A1	20011121	EP 2000-902449	20000120
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002537363	T2	20021105	JP 2000-600703	20000120
PRAI US 1999-258148	A	19990226		
US 1997-816332	A2	19970313		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2000050093	ICM	A61K049-00
	IPCI	A61K0049-00 [ICM,7]
	IPCR	A61K0049-00 [I,A]; A61K0049-00 [I,C*]
	ECLA	A61K049/00P4F
US 6228344	IPCI	A61K0049-00 [ICM,7]; G01N0031-00 [ICS,7]
	IPCR	A61K0049-00 [I,A]; A61K0049-00 [I,C*]
	NCL	424/009.100; 424/001.110; 424/009.600
	ECLA	A61K049/00P4F
CA 2360421	IPCI	A61K0049-00 [ICM,7]
	IPCR	A61K0049-00 [I,A]; A61K0049-00 [I,C*]
EP 1154802	IPCI	A61K0049-00 [ICM,6]
	IPCR	A61K0049-00 [I,A]; A61K0049-00 [I,C*]
JP 2002537363	IPCI	A61K0049-00 [ICM,7]
	IPCR	A61K0049-00 [I,A]; A61K0049-00 [I,C*]
AB	A method of measuring physiol. function of a group of body cells, includes the step of selecting a detectable agent capable of emitting a measurable electromagnetic emission. The agent is introduced into body fluid which contacts the group of body cells. The emission is measured, and physiol. function is detd. based on measurement of the emission. Fluorescent dyes conjugated to physiol. acceptable polyanionic carries are used.	
ST	kidney liver function fluorometry dye clearance	
IT	Medical goods (catheter; in vivo method of measuring kidney or liver function with fluorescent dye clearance)	
IT	Polynucleotides RL: ARU (Analytical role, unclassified); ANST (Analytical study) (***complexes*** with dyes; in vivo method of measuring kidney or liver function with fluorescent dye clearance)	
IT	Imaging agents (contrast; in vivo method of measuring kidney or liver function with fluorescent dye clearance)	
IT	Unsaturated compounds RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses) (cyanines; in vivo method of measuring kidney or liver function with fluorescent dye clearance)	
IT	Medical goods (endoscope; in vivo method of measuring kidney or liver function with fluorescent dye clearance)	
IT	Kidney Liver (function; in vivo method of measuring kidney or liver function with fluorescent dye clearance)	
IT	Body fluid Fluorometry ***Laser*** radiation (in vivo method of measuring kidney or liver function with fluorescent dye clearance)	
IT	Blood analysis (in vivo; in vivo method of measuring kidney or liver function with fluorescent dye clearance)	
IT	Vein (jugular; in vivo method of measuring kidney or liver function with fluorescent dye clearance)	
IT	Animal cell (kidney; in vivo method of measuring kidney or liver function with fluorescent dye clearance)	
IT	Animal cell (liver; in vivo method of measuring kidney or liver function with fluorescent dye clearance)	
IT	92-84-2D, Phenothiazine, derivs. 110-15-6D, Succinic acid, reaction with fluorescent dye agents 110-94-1D, Glutaric acid, polymers, reaction with fluorescent dye agents 141-82-2D, Malonic acid, polymers, reaction with fluorescent dye agents 262-05-5D, Phenoselenazine, derivs. 3246-80-8D, 9-Phenylxanthene, derivs. 9003-01-4D, Polyacrylic acid, reaction with fluorescent dye agents 24937-47-1 24937-49-3 24991-23-9 25191-15-5D, L-Phenylalanine homopolymer, sulfonyl derivs. 25821-94-7 26009-03-0D, Polyglycolic acid, reaction with fluorescent dye agents 26063-13-8, Polyaspartic acid 26124-68-5D, Polyglycolic acid, reaction	

with fluorescent dye agents 26913-90-6 28677-33-0D, reaction with fluorescent dye agents 28679-89-2D, reaction with fluorescent dye agents 38000-06-5 78675-98-6D, ***Squaraine***, derivs., reaction with fluorescent dye agents 290307-49-2D, reaction with fluorescent dye agents 290307-51-6D, reaction with polynucleotides 290307-57-2D, reaction with polynucleotides 290356-35-3D, reaction with fluorescent dye agents 290356-59-1D, reaction with fluorescent dye agents
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (in vivo method of measuring kidney or liver function with fluorescent dye clearance)

IT 9003-01-4, Polyacrylic acid 25104-12-5, Polyornithine 25104-18-1, Polylysine 25821-52-7, Polyserine
 RL: ARU (Analytical role, unclassified); ANST (Analytical study)
 (in vivo method of measuring kidney or liver function with fluorescent dye clearance)

IT 1497-49-0 3599-32-4D, Indocyanine green, derivs. 4224-70-8, 6-Bromohexanoic acid 25212-18-4, Polyarginine 25513-46-6, Polyglutamic acid 25608-40-6, Polyaspartic acid 26853-89-4, Poly-D-lysine 27072-45-3, Fitc 27072-45-3D, FITC, reaction with polynucleotides 41532-84-7, 1,1,2-Trimethyl-[1H]-benz[e]indole 78675-98-6D, ***Squaraine***, derivs., reaction with polynucleotides 108157-58-0
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (in vivo method of measuring kidney or liver function with fluorescent dye clearance)

IT 3599-32-4P, Indocyanine green 24937-47-1DP, Polyarginine, reaction with fluorescent dye agents 24991-23-9DP, reaction with fluorescent dye agents 25212-18-4DP, Polyarginine, reaction with fluorescent dye agents 25513-46-6DP, Polyglutamic acid, reaction with fluorescent dye agents 25608-40-6DP, Polyaspartic acid, reaction with fluorescent dye agents 26063-13-8DP, Polyaspartic acid, reaction with fluorescent dye agents 26853-89-4DP, Poly-D-lysine, reaction with FITC 26913-90-6DP, Poly-D-lysine, reaction with FITC 108157-58-0DP, reaction with fluorescent dye agents, conjugates
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (in vivo method of measuring kidney or liver function with fluorescent dye clearance)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE
 (1) Diagnostikforschung Inst; DE 4445065 A 1996 CAPLUS
 (2) Souli, S; PROCEEDINGS OF THE SPIE 1995, V2627, P109
 (3) Univ Washington Mallinckrodt Medical Inc; WO 9840106 A 1998 CAPLUS
 (4) Urata; CAPLUS
 (5) Urata; YAKURI TO CHIRYO 1992, V20(SUPPL 10), PS2551

L6 ANSWER 35 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2000:388912 CAPLUS <<LOGINID::20060727>>
 DN 133:50994
 ED Entered STN: 13 Jun 2000
 TI ***Metal*** coordination compounds, NIR absorbers and plasma display panel filters
 IN Osawa, Tetsuo; Shimizu, Kanji
 PA Mitsubishi Chemical Industries Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C07F001-08
 ICS C09K003-00; G02B001-10; G02B005-22
 CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
 Section cross-reference(s): 29, 74

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000159776	A2	20000613	JP 1998-337354	19981127
PRAI	JP 1998-337354		19981127		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2000159776	ICM	C07F001-08

ICS C09K003-00; G02B001-10; G02B005-22
 IPCI C07F0001-08 [ICM,7]; C09K0003-00 [ICS,7]; G02B0001-10
 [ICS,7]; G02B0005-22 [ICS,7]
 IPCR C07F0001-00 [I,C*]; C07F0001-08 [I,A]; C09K0003-00
 [I,A]; C09K0003-00 [I,C*]; G02B0001-10 [I,A];
 G02B0001-10 [I,C*]; G02B0005-22 [I,A]; G02B0005-22
 [I,C*]

OS MARPAT 133:50994
 GI

/ Structure 24 in file .gra /

AB The ***complex*** compds. comprise ***metals*** (Cu, Co, Zn, Ni)
 and a ***squarylium*** deriv. I [R1, R1' = H, (substituted)
 alkylamino, (substituted) dialkylamino, (substituted) cycloalkylamino;
 (substituted) alkoxy; X, X' = group contg. active H; A, B = arom. carbon
 ring, arom. heterocyclic ring; k, k' = 1-4].
 ST ***metal*** coordination ***squarylium*** NIR absorber plasma
 filter
 IT Coordination compounds
 RL: PRP (Properties)
 (Cu, Co, Zn, Ni; ***metal*** coordination compds., NIR absorbers
 and plasma display panel filters)
 IT ***Optical*** filters
 Plasma display panels
 (***metal*** coordination compds., NIR absorbers and plasma display
 panel filters)
 IT Polyesters, properties
 Polyvinyl butyrals
 RL: PRP (Properties)
 (***metal*** coordination compds., NIR absorbers and plasma display
 panel filters)
 IT IR spectra
 (near-IR; ***metal*** coordination compds., NIR absorbers and
 plasma display panel filters)
 IT 9011-14-7, PMMA 25038-59-9, Polyethyleneterephthalate, properties
 203674-47-9 206141-46-0 274926-11-3 274926-12-4 274926-13-5
 274926-14-6 274926-15-7 274926-16-8 274926-17-9 274926-18-0
 274926-19-1 274926-20-4
 RL: PRP (Properties)
 (***metal*** coordination compds., NIR absorbers and plasma display
 panel filters)

L6 ANSWER 36 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2000:1833 CAPLUS <<LOGINID::20060727>>
 DN 132:134255
 ED Entered STN: 03 Jan 2000
 TI Determination of protein-dye association by near infrared
 fluorescence-detected circular dichroism
 AU Meadows, Frederick; Narayanan, Nara; Patonay, Gabor
 CS Department of Chemistry, Georgia State University, Atlanta, GA, 30303, USA
 SO Talanta (2000), 50(6), 1149-1155
 CODEN: TLNTA2; ISSN: 0039-9140
 PB Elsevier Science B.V.
 DT Journal
 LA English
 CC 9-5 (Biochemical Methods)
 Section cross-reference(s): 6
 AB Near-IR (NIR) ***squarylium*** dye spectral properties were evaluated
 by absorption, fluorescence, CD (CD), and fluorescence-detected CD (FD CD).
 Substituents of the two NN dyes differed at R1 and R2, located sym. on the
 chromophore. The side chains of NN525 are R1 = hexanoic acid, R2 = Bu
 sulfonate and R1 = R2 = Et for NN127. FD CD signals were first confirmed
 by denaturing BSA with 2-8 M urea showing a diminution of dye FD CD peaks,
 but no change occurred in spectral properties of the dyes in urea. This
 indicated that the obsd. cotton effects occurred by noncovalent
 interactions with the secondary structure of the protein. The av. BSA-dye
 assocn. consts. found by fluorescence, absorbance, and FD CD were

1.27.times.106 (n = 1) and 3.3.times.106 M-1 (n = 1) for NN127 and NN525 resp. These values were in good agreement when calcd. by the three spectroscopic methods validating the use of NIRFDCD for ***optical*** parameter calcns. These results are useful to describe NIR
 squarylium dye labeling of BSA.

ST protein dye assocn near IR fluorescence detected CD
 IT Proteins, specific or class
 RL: PRP (Properties)
 (***complexes*** ; detn. of protein-dye assocn. by near IR fluorescence-detected CD)

IT Cotton effect
 Formation constant
 Molecular association
 (detn. of protein-dye assocn. by near IR fluorescence-detected CD)

IT Circular dichroism spectroscopy
 (fluorescence detected, FDCD; detn. of protein-dye assocn. by near IR fluorescence-detected CD)

IT Secondary structure
 (protein; detn. of protein-dye assocn. by near IR fluorescence-detected CD)

IT Albumins, properties
 RL: PEP (Physical, engineering or chemical process); PRP (Properties);
 PROC (Process)
 (serum; detn. of protein-dye assocn. by near IR fluorescence-detected CD)

IT 138496-68-1, NN 127 256924-69-3, NN 525
 RL: PEP (Physical, engineering or chemical process); PRP (Properties);
 PROC (Process)
 (detn. of protein-dye assocn. by near IR fluorescence-detected CD)

RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L6 ANSWER 37 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1999:558366 CAPLUS <<LOGINID::20060727>>
 DN 131:278799
 ED Entered STN: 02 Sep 1999
 TI Charge distortion by sparkles can explain strong SHG by centrosymmetric
 squaraine dyes

AU Honeybourne, Colin L.
 CS Department of Chemical and Physical Sciences, UWE, Bristol, BS16 1QY, UK
 SO Journal of Materials Chemistry (1999), 9(9), 2241-2244
 CODEN: JMACEP; ISSN: 0959-9428
 PB Royal Society of Chemistry
 DT Journal
 LA English
 CC 73-10 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

AB G.J. Ashwell et ***al*** . (1995) published a report describing 2nd harmonic generation (SHG) from a ***laser*** beam (Nd:YAG, 1.064 .mu.m) by a Langmuir-Blodgett (LB) monolayer of a sym. substituted diaryl
 squaraine dye. The mol. geometry of the ***squaraine*** , its unit cell is centrosym. in the cryst. state. Interfacial effects (arising from the twin-step function in the refractive index) cannot account for the magnitude of the obsd. SHG. Presumably mol. centrosymmetry was retained in the LB film, with the obsd. SHG being attributed to the presence of noncentrosym. ensembles of these centrosym. mols. An electronically distorted (and therefore noncentrosym.) ***squaraine***

mol. can exhibit large SHG coeffs., these distortions being induced by the proximity of the highly polar species that constitute the mol. environment. In the model of a T-shaped dimer, both monomer components become noncentrosym., the mutual interaction between the 2 monomers being modeled by using a neg. or a pos. sparkle. The noteworthy SHG output from LB films of A.'s centrosym. ***squaraines*** is attributed to intramol. charge transfer within the distorted monomers in the T-dimer.

ST charge distortion sparkle harmonic generation centrosym ***squaraine*** dye

IT Second-harmonic generation
(charge distortion by sparkles can explain centrosym. ***squaraine*** dye strong)

IT Dyes
(charge distortion by sparkles can explain strong second-harmonic generation by centrosym. ***squaraine***)

IT Langmuir-Blodgett films
(charge distortion by sparkles can explain strong second-harmonic generation by centrosym. ***squaraine*** dyes in)

IT Electron transfer
(charge distortion by sparkles can explain strong second-harmonic generation by centrosym. ***squaraine*** dyes in relation to)

IT 43134-09-4, Cyclobutenediylum, 1,3-bis(4-(dimethylamino)phenyl)-2,4-dihydroxy-, bis(inner salt) 84688-00-6, Cyclobutenediylum, 1,3-bis(4-aminophenyl)-2,4-dihydroxy-, bis(inner salt)
RL: PRP (Properties)
(charge distortion by sparkles can explain strong second-harmonic generation by)

RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD

- RE
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L6 ANSWER 38 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1999:485948 CAPLUS <<LOGINID::20060727>>

DN 131:215648

ED Entered STN: 06 Aug 1999

TI Novel fluorescent chemosensor for Li+ based on a ***squarylium*** dye carrying a monoazacrown moiety

AU Kim, Sung-Hoon; Han, Sun-Kyung; Park, Sang-Hyun; Yoon, Cheol-Min; Keum, Sam-Rok

CS Department of Dyeing and Finishing, College of Engineering, Kyungpook National University, Taegu, 702- 701, S. Korea

SO Dyes and Pigments (1999), 43(1), 21-25

CODEN: DYPIDX; ISSN: 0143-7208

PB Elsevier Science Ltd.

DT Journal

LA English

CC 41-11 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
 Section cross-reference(s): 73, 79

AB A ***squarylium*** dye carrying a monoazacrown moiety has been synthesized and characterized. The dye demonstrates sensitivity to Li+ ***complexation*** with spectroscopic changes in fluorescence. ***Complex*** formation of the dye with Cu2+ was also investigated by UV-visible spectrometry.

ST ***squarylium*** azacrown dye prepn; fluorescent sensor lithium detection; copper ***complexation*** ***squaraine*** crown ether dye

IT Fluorescent dyes
 Fluorescent dyes
 (cyanine; prepn. of azacrown ***squarylium*** dye fluorescent sensor for lithium)

IT Cyanine dyes
 Cyanine dyes
 Optical sensors
 Optrodes
 (fluorescent; prepn. of azacrown ***squarylium*** dye fluorescent sensor for lithium)

IT Azacrown ethers
 RL: ARG (Analytical reagent use); SPN (Synthetic preparation); TEM (Technical or engineered material use); ANST (Analytical study); PREP (Preparation); USES (Uses)
 (prepn. of azacrown ***squarylium*** dye fluorescent sensor for lithium)

IT 243658-04-0P
 RL: ARG (Analytical reagent use); SPN (Synthetic preparation); TEM (Technical or engineered material use); ANST (Analytical study); PREP (Preparation); USES (Uses)
 (dye; prepn. of azacrown ***squarylium*** dye fluorescent sensor for lithium)

IT 7440-50-8, Copper, properties
 RL: PRP (Properties)
 (effect on azacrown ***squarylium*** dye absorption intensity)

IT 7439-93-2, Lithium, analysis
 RL: ANT (Analyte); ANST (Analytical study)
 (prepn. of azacrown ***squarylium*** dye fluorescent sensor for)

IT 2892-51-5 243645-85-4
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (starting material; prepn. of azacrown ***squarylium*** dye fluorescent sensor for lithium)

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L6 ANSWER 39 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1999:423165 CAPLUS <<LOGINID::20060727>>

DN 131:177236

ED Entered STN: 09 Jul 1999

TI Characteristics of photogeneration of charge carriers in films of amorphous molecular semiconductors doped with a ***squarylium*** dye

AU Davidenko, N. A.; Ishchenko, A. A.; Pavlov, V. A.
 CS Kiev. Gos. Univ. im. T.G.Shevchenko, Kiev, Ukraine
 SO Zhurnal Nauchnoi i Prikladnoi Fotografii (1999), 44(2), 52-56
 CODEN: ZNPFEK; ISSN: 0869-6144
 PB Nauka
 DT Journal
 LA Russian
 CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 Section cross-reference(s): 76
 GI

/ Structure 25 in file .gra /

AB ***Optical*** and electrophotophys. properties of poly(N-
 epoxypropylcarbazole) (P) films doped with a ***squarylium*** dye (I)
 were studied and compared with the data for the films doped with a
 structurally similar cationic cyanine dye (II) . The studied samples
 included quartz support-(P+dopant) structure and a sandwich ***Al***
 -(P+dopant)-SnO2 structure. ***Optical*** absorption and luminescence
 were studied as functions of the dopant concn. in the range 10-3 - 5 wt.%.
 Increases were obsd. of luminescence quenching by external elec. field and
 of quantum yields of free charge carriers with increase of concn. of I in
 the films. Increase of photocond. is explained as a result of
 squarylium dye aggregation.
 ST charge carrier photogeneration epoxypropylcarbazole polymer semiconductor
 squarylium dye dopant; electrophotog holog charge carrier
 IT photogeneration polyepoxypropylcarbazole ***squarylium*** dye dopant
 Electric current carriers
 (photocarriers, photo-; photogeneration of charge carriers in amorphous
 semiconductors doped with ***squarylium*** dye)
 IT Luminescence
 Luminescence quenching
 Molecular association
 Optical absorption
 Photoconductivity
 Photocurrent
 (photogeneration of charge carriers in amorphous semiconductors doped
 with ***squarylium*** dye)
 IT Polyoxyalkylenes, properties
 RL: PEP (Physical, engineering or chemical process); PRP (Properties);
 PROC (Process)
 (photogeneration of charge carriers in amorphous semiconductors doped
 with ***squarylium*** dye)
 IT Electrophotographic photoconductors (photoreceptors)
 Holographic recording materials
 (photogeneration of charge carriers in amorphous semiconductors doped
 with ***squarylium*** dye in relation to)
 IT 14238-53-0 38575-74-5
 RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical
 process); PRP (Properties); PROC (Process); USES (Uses)
 (photogeneration of charge carriers in amorphous semiconductors doped
 with ***squarylium*** dye)
 IT 55774-96-4, Poly(N-epoxypropylcarbazole) 106440-27-1,
 Poly(N-epoxypropylcarbazole),sru
 RL: PEP (Physical, engineering or chemical process); PRP (Properties);
 PROC (Process)
 (photogeneration of charge carriers in amorphous semiconductors doped
 with ***squarylium*** dye)
 L6 ANSWER 40 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1999:202919 CAPLUS <<LOGINID::20060727>>
 DN 130:305693
 ED Entered STN: 01 Apr 1999
 TI Use of ***squarylium*** dyes as a sensing molecule in ***optical***
 sensors for the detection of ***metal*** ions
 AU Kim, Sung Hoon; Han, Sun Kyung; Park, Sang Hyun; Lee, Sang Min; Lee, Su
 Mi; Koh, Kwang Nak; Kang, Shin Won
 CS Department of Dyeing and Finishing, Kyungpook National University, Taegu,
 702-701, S.Korea

SO Dyes and Pigments (1999), 41(3), 221-226
 CODEN: DYPIDX; ISSN: 0143-7208
 PB Elsevier Science Ltd.
 DT Journal
 LA English
 CC 79-3 (Inorganic Analytical Chemistry)
 Section cross-reference(s): 41
 AB The ***complex*** formation of ***squarylium*** (SQ) and dithiosquarylium (DTSQ) dyes with Cu²⁺ and Ag⁺ was studied spectrophotometrically. Their absorption spectra showed cation selective spectral intensity changes in the presence of specific ***metal*** ions in CH₂Cl₂-CH₃CN due to cation ***complexing***. Highly selective ion sensing film optodes for the detn. of two kinds of ions, Cu²⁺ and Ag⁺, were prepd. with plasticized PVC-PVAc-PVA membranes contg. the SQ or DTSQ dye.
 ST ***squarylium*** dye sensing mol ***optical*** sensor
 metal ion
 IT Absorption spectra
 (absorption spectra of ***metal*** ***squarylium*** dye
 complexes)
 IT Ionophores
 (chromoionophores; ***metal*** ions detn. by film optodes based on
 squarylium dyes)
 IT ***Complexation***
 (***complex*** formation of ***squarylium*** and
 dithiosquarylium dyes with Cu²⁺ and Ag⁺)
 IT Dyes
 Optodes
 (***metal*** ions detn. by film optodes based on ***squarylium***
 dyes)
 IT ***Metals*** , analysis
 RL: ANT (Analyte); ANST (Analytical study)
 (***metal*** ions detn. by film optodes based on ***squarylium***
 dyes)
 IT 7440-22-4, Silver, analysis 7440-50-8, Copper, analysis
 RL: ANT (Analyte); ANST (Analytical study)
 (***metal*** ions detn. by film optodes based on ***squarylium***
 dyes)
 IT 68842-68-2 203269-10-7
 RL: ARG (Analytical reagent use); DEV (Device component use); ANST
 (Analytical study); USES (Uses)
 (***metal*** ions detn. by film optodes based on ***squarylium***
 dyes)
 IT 117-81-7, DOP 25086-48-0, Vinyl acetate-vinyl alcohol-vinyl chloride
 copolymer 79060-88-1, Sodium tetrakis[3,5-bis(trifluoromethyl)phenyl]bor
 ate
 RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST
 (Analytical study); USES (Uses)
 (***metal*** ions detn. by film optodes based on ***squarylium***
 dyes)

RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L6 ANSWER 41 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1999:67214 CAPLUS <<LOGINID::20060727>>
DN 130:229909
ED Entered STN: 02 Feb 1999
TI Photoinduced energy transfer and charge transfer of ***squarylium***
cyanine dyes
AU Zhao, Wei; Zhang, Bao-Wen; Hou, Yuan-Jun; Cao, Yi
CS Photochemistry Laboratory, Institute of Photographic Chemistry, Chinese
Academy of Sciences, Beijing, 100101, Peop. Rep. China
SO Chinese Journal of Chemistry (1998), 16(6), 499-508
CODEN: CJOCEV; ISSN: 1001-604X
PB Science Press
DT Journal
LA English
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)
AB A series of ***squarylium*** cyanine dyes (Sqs) were synthesized to
explore their applications in functional devices. Preliminary
investigation on the mechanism involved in these devices was carried out.
Spectroscopic behavior of Sqs with porphyrin (P), 8-hydroxyquinolium
aluminum (Alq) and ruthenium bipyridyl ***complex*** (Ru(bipy)) in
soln., in film and on nanocryst. TiO2 was investigated, resp. A mechanism
including photoinduced energy transfer and charge transfer processes was
suggested in the corresponding practical devices. By means of doping, a
red org. electroluminescent device (ELD) using Sq-doped Alq as the
emission layer (EML) has been developed, and the total light to
electricity efficiency of nanocryst. TiO2 electrode based on using
Sq-doped Ru(bipy) as photosensitizer has been improved greatly in the
whole visible region, particularly in the red area above 600 nm.
ST photoinduced energy charge transfer ***squarylium*** cyanine dye;
electroluminescent photoelec device dopant ***squarylium*** dye
photophys
IT Electroluminescent devices
Fluorescence quenching
Luminescence, electroluminescence
Photocurrent
Photoinduced electron transfer
Photoinduced energy transfer
(photoinduced energy-transfer and charge-transfer of ***squarylium***
cyanine dyes for application in electroluminescent- and photoelec.
devices)
IT Luminescence
Optical absorption
(photophys. properties of ***squarylium*** cyanine dyes for
application in electroluminescent- and photoelec. devices)
IT 13463-67-7, Titania, uses
RL: DEV (Device component use); USES (Uses)
(electrode; photoinduced energy-transfer and charge-transfer of
squarylium cyanine dyes for application in electroluminescent-
and photoelec. devices)
IT 2085-33-8
RL: DEV (Device component use); USES (Uses)
(emission layer; photoinduced energy-transfer and charge-transfer of
squarylium cyanine dyes for application in electroluminescent-
and photoelec. devices)
IT 65181-78-4
RL: DEV (Device component use); USES (Uses)
(hole transport layer; photoinduced energy-transfer and charge-transfer
of ***squarylium*** cyanine dyes for application in
electroluminescent- and photoelec. devices)
IT 141460-19-7
RL: DEV (Device component use); USES (Uses)
(photoelectrode sensitizer; photoinduced energy-transfer and
charge-transfer of ***squarylium*** cyanine dyes for application in
electroluminescent- and photoelec. devices)
IT 12243-46-8 72936-99-3 185704-26-1
RL: DEV (Device component use); PEP (Physical, engineering or chemical
process); PRP (Properties); PROC (Process); USES (Uses)
(photoinduced energy-transfer and charge-transfer of ***squarylium***

cyanine dyes for application in electroluminescent- and photoelec.
devices)

IT 57715-42-1

RL: PEP (Physical, engineering or chemical process); PROC (Process)
(photophys. properties and interactions with porphyrin of
squarylium cyanine dyes for application in electroluminescent-
and photoelec. devices)

RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L6 ANSWER 42 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1998:568345 CAPLUS <<LOGINID::20060727>>

DN 130:8622

ED Entered STN: 07 Sep 1998

TI A comment upon the second-order non-linear ***optical*** properties of
2,4-bis(N-octadecylpyrrol-2-yl) ***squaraine***

AU Ashwell, G. J.; Jefferies, G.; Green, A.; Skjonnemand, K.; Rees, N. D.;
Bahra, G. S.; Brown, C. R.

CS Centre for Molecular Electronics, Cranfield University, Cranfield, MK43
0AL, UK

SO Thin Solid Films (1998), 327-329, 461-464

CODEN: THSFAP; ISSN: 0040-6090

PB Elsevier Science S.A.

DT Journal

LA English

CC 73-10 (Optical, Electron, and Mass Spectroscopy and Other Related
Properties)

Section cross-reference(s): 66

AB The title compd., 2,4-bis(N-octadecylpyrrol-2-yl) ***squaraine*** (1a),
is centric and shows no discernible 2nd-harmonic generation (SHG) when
deposited as a Langmuir-Blodgett (LB) film. This conflicts with the
disclosure of 2nd-order activity by Lynch et al. (D.E. Lynch, U.
Geissler, IR Peterson et al., J. Chem. Soc. Perkin II (1997)
827) and invalidates the proposed mechanism, the SHG being
impurity-induced and influenced by interfacial effects. Their data
indicate a mixt. of isomeric forms, the centric 2,4-squarate (1a: UCO =
1625 cm⁻¹) and an acentric 1,2-squarate (1b: UCO = 1750 cm⁻¹) in a ratio
of 3:1, whereas the authors' SHG-inactive sample has a single CO band at
1626 cm⁻¹. LB films of the related dye, 2,4-bis(N-octadecyl-3,5-
dimethylpyrrol-2-yl) ***squaraine*** (2), exhibit very weak SHG when
deposited on glass slides but the signal is suppressed when there is an
org. buffer layer between the monolayer and substrate. The nonlinear
optical behavior is not an inherent property of the film and,
instead, is attributed to the polarization of the chromophore by the
underlying substrate. The thickness and dielec. permittivities of the LB
monolayer of dye 2, derived from an anal. of the surface plasmon resonance

(SPR), are 1 = 27 A, .epsilon.r = 3.4 and .epsilon.i=0.39, resp.
 ST second order nonlinear ***optical*** property ***squaraine*** ;
 octadecylpyrrolyl ***squaraine*** Langmuir Blodgett film
 IT Dielectric constant
 Isomerization
 Isomers
 Langmuir-Blodgett films
 Nonlinear ***optical*** properties
 Surface pressure
 (a comment upon second-order non-linear ***optical*** properties of
 2,4-bis(N-octadecylpyrrol-2-yl) ***squaraine***)
 IT Surface plasmon
 (resonance; a comment upon second-order non-linear ***optical***
 properties of 2,4-bis(N-octadecylpyrrol-2-yl) ***squaraine***)
 IT 189892-80-6P, 1,2-Bis(N-octadecylpyrrol-2-yl) ***squaraine***
 204464-09-5P, 2,4-Bis(N-octadecyl-3,5-dimethylpyrrol-2-yl)
 squaraine 204464-10-8P, 2,4-Bis(N-octadecylpyrrol-2-yl)
 squaraine
 RL: PEP (Physical, engineering or chemical process); PNU (Preparation,
 unclassified); PRP (Properties); PREP (Preparation); PROC (Process)
 (a comment upon second-order non-linear ***optical*** properties of
 2,4-bis(N-octadecylpyrrol-2-yl) ***squaraine***)
 IT 2892-51-5, Squaric acid 89601-24-1, N-Octadecylpyrrole 189892-86-2,
 N-Octadecyl-2,4-dimethylpyrrole
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (a comment upon second-order non-linear ***optical*** properties of
 2,4-bis(N-octadecylpyrrol-2-yl) ***squaraine***)

RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD

- RE
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L6 ANSWER 43 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1998:351795 CAPLUS <<LOGINID::20060727>>

DN 129:38409

ED Entered STN: 10 Jun 1998

TI ***Optical*** diagnostic agents for diagnosis of neurodegenerative
 diseases by means of near infra-red radiation (NIR radiation)

IN Turner, Jonathan; Dyrks, Thomas; Semmler, Wolfhard; Licha, Kai; Riefke,
 Bjorn

PA Institut fur Diagnostikforschung G.m.b.H. an der Freien Universitat
 Berlin, Germany; Turner, Jonathan; Dyrks, Thomas; Semmler, Wolfhard;
 Licha, Kai; Riefke, Bjorn

SO PCT Int. Appl., 39 pp.

CODEN: PIXXD2

DT Patent

LA German

IC ICM A61K049-00

CC 9-16 (Biochemical Methods)

Section cross-reference(s): 63

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9822146	A2	19980528	WO 1997-DE2559	19971029
	WO 9822146	A3	19981015		
	W:	AU, CA, CN, HU, JP, KR, NO, US			
	RW:	AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE			
	DE 19649971	A1	19980528	DE 1996-19649971	19961119

CA 2272320	AA	19980528	CA 1997-2272320	19971029
AU 9872985	A1	19980610	AU 1998-72985	19971029
EP 942756	A2	19990922	EP 1997-948710	19971029
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
CN 1237911	A	19991208	CN 1997-199895	19971029
JP 2001506591	T2	20010522	JP 1998-523059	19971029
US 6329531	B1	20011211	US 1999-308177	19991118
PRAI DE 1996-19649971	A	19961119		
WO 1997-DE2559	W	19971029		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9822146	ICM	A61K049-00
	IPCI	A61K0049-00 [ICM,6]
	IPCR	A61K0049-00 [I,A]; A61K0049-00 [I,C*]; C07H0015-00 [I,C*]; C07H0015-26 [I,A]; C08B0037-00 [I,A]; C08B0037-00 [I,C*]; C09B0023-00 [I,C*]; C09B0023-08 [I,A]; C09B0056-00 [I,C*]; C09B0056-16 [I,A]; G01N0033-52 [I,A]; G01N0033-52 [I,C*]; G01N0033-68 [I,A]; G01N0033-68 [I,C*]
	ECLA	A61K049/00P4F; C09B056/16; G01N033/52; G01N033/68V2; C07H015/26; C08B037/00P2G; C09B023/08D
DE 19649971	IPCI	C09B0023-02 [ICM,6]; C09B0023-00 [ICM,6,C*]; C09B0069-10 [ICS,6]; C09B0069-00 [ICS,6,C*]; C09B0056-16 [ICS,6]; C09B0056-00 [ICS,6,C*]; C08B0037-00 [ICS,6]; G01N0021-64 [ICS,6]; G01N0033-48 [ICS,6]; G01N0033-53 [ICS,6]; C07H0013-08 [ICS,6]; C07H0013-00 [ICS,6,C*]; C07K0016-00 [ICS,6]; A61K0049-00 [ICS,6]; C08B0037-10 [ICA,6]; C12Q0001-00 [ICA,6]; C07D0209-22 [ICA,6]; C07D0209-00 [ICA,6,C*]; C07D0207-404 [ICA,6]; C07D0207-00 [ICA,6,C*]; C07D0403-06 [ICA,6]; C07D0403-00 [ICA,6,C*]; C07D0413-06 [ICA,6]; C07D0413-00 [ICA,6,C*]; C07D0417-06 [ICA,6]; C07D0417-00 [ICA,6,C*]; C07D0215-06 [ICA,6]; C07D0215-00 [ICA,6,C*]; C07D0231-20 [ICA,6]; C07D0231-00 [ICA,6,C*]; C07D0235-20 [ICA,6]; C07D0235-00 [ICA,6,C*]
	IPCR	A61K0049-00 [I,A]; A61K0049-00 [I,C*]; C07H0015-00 [I,C*]; C07H0015-26 [I,A]; C08B0037-00 [I,A]; C08B0037-00 [I,C*]; C09B0023-00 [I,C*]; C09B0023-08 [I,A]; C09B0056-00 [I,C*]; C09B0056-16 [I,A]; G01N0033-52 [I,A]; G01N0033-52 [I,C*]; G01N0033-68 [I,A]; G01N0033-68 [I,C*]
	ECLA	A61K049/00P4F; C07H015/26; C08B037/00P2G; C09B023/08D; C09B056/16; G01N033/52; G01N033/68V2
CA 2272320	IPCI	A61K0049-00 [ICM,6]; G01N0033-533 [ICS,6]; G01N0033-58 [ICS,6]
AU 9872985	IPCI	A61K0049-00 [ICM,6]
	IPCR	A61K0049-00 [I,A]; A61K0049-00 [I,C*]; C07H0015-00 [I,C*]; C07H0015-26 [I,A]; C08B0037-00 [I,A]; C08B0037-00 [I,C*]; C09B0023-00 [I,C*]; C09B0023-08 [I,A]; C09B0056-00 [I,C*]; C09B0056-16 [I,A]; G01N0033-52 [I,A]; G01N0033-52 [I,C*]; G01N0033-68 [I,A]; G01N0033-68 [I,C*]
EP 942756	IPCI	A61K0049-00 [ICM,6]
	IPCR	A61K0049-00 [I,A]; A61K0049-00 [I,C*]; C07H0015-00 [I,C*]; C07H0015-26 [I,A]; C08B0037-00 [I,A]; C08B0037-00 [I,C*]; C09B0023-00 [I,C*]; C09B0023-08 [I,A]; C09B0056-00 [I,C*]; C09B0056-16 [I,A]; G01N0033-52 [I,A]; G01N0033-52 [I,C*]; G01N0033-68 [I,A]; G01N0033-68 [I,C*]
CN 1237911	IPCI	A61K0049-00 [ICM,6]; G01N0033-58 [ICS,6]; G01N0033-533 [ICS,6]
	IPCR	A61K0049-00 [I,A]; A61K0049-00 [I,C*]; C07H0015-00 [I,C*]; C07H0015-26 [I,A]; C08B0037-00 [I,A]; C08B0037-00 [I,C*]; C09B0023-00 [I,C*]; C09B0023-08 [I,A]; C09B0056-00 [I,C*]; C09B0056-16 [I,A]; G01N0033-52 [I,A]; G01N0033-52 [I,C*]; G01N0033-68 [I,A]; G01N0033-68 [I,C*]
JP 2001506591	IPCI	C07D0209-14 [ICM,7]; C07D0209-00 [ICM,7,C*]; A61K0049-00 [ICS,7]; C07D0231-22 [ICS,7]; C07D0231-00

[ICS,7,C*]; C07D0277-60 [ICS,7]; C07D0277-64 [ICS,7];
 C07D0277-00 [ICS,7,C*]; C07H0005-06 [ICS,7];
 C07H0005-00 [ICS,7,C*]; C07K0014-00 [ICS,7];
 C07K0016-00 [ICS,7]; C08B0037-00 [ICS,7]; C09B0056-16
 [ICS,7]; C09B0056-00 [ICS,7,C*]
 US 6329531 IPCI G01N0033-51 [ICM,7]; G01N0035-533 [ICS,7]; A61K0049-00
 [ICS,7]; C09B0057-04 [ICS,7]; C09B0057-00 [ICS,7,C*];
 C09B0056-16 [ICS,7]; C09B0056-00 [ICS,7,C*]
 IPCR A61K0049-00 [I,A]; A61K0049-00 [I,C*]; C07H0015-00
 [I,C*]; C07H0015-26 [I,A]; C08B0037-00 [I,A];
 C08B0037-00 [I,C*]; C09B0023-00 [I,C*]; C09B0023-08
 [I,A]; C09B0056-00 [I,C*]; C09B0056-16 [I,A];
 G01N0033-52 [I,A]; G01N0033-52 [I,C*]; G01N0033-68
 [I,A]; G01N0033-68 [I,C*]
 NCL 548/455.000; 424/009.340; 424/009.600; 534/747.000;
 534/822.000; 536/026.600; 536/029.110; 536/029.130;
 548/362.500; 548/364.700
 ECLA A61K049/00P4F; C07H015/26; C08B037/00P2G; C09B023/08D;
 C09B056/16; G01N033/52; G01N033/68V2
 OS MARPAT 129:38409
 GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The invention concerns compds. Fm(-A1) (-Bn) (-WO) (I) wherein F is a dye
 label mol. with an absorption max. 600-1200 nm; A is a .beta.-amyloid
 plaque binding biomol.; B is a .beta.-amyloid plaque binding dye; and W is
 a .beta.-amyloid plaque binding hydrophilic low-mol. structural element.
 The nos. in the formula are m = 1,2 or if n and o = 0 than m = 3-20; l and
 n are independently 0,1,2; o = 0,1,2,3,4 if l+n+o .gtoreq. 0. Part F in I
 is a cyano, ***squarilium***, croconium, merocyano or oxonol dye with
 the structures II, III, IV and V (R1-R4 and R7-R10 are H, F, Cl, Br, I,
 nitro or -COOE1, -COOE1E2, -NHCOE1, -NHCONHE1, -NE1E2, -OE1, -OSO3OE1,
 -SO3OE1, -SO2NHE, -E1; E1 and E2 are independently H, satd., unsatd.,
 linear, branched C1-C50 alkyl; the chain can include C5 or C6 arom. or
 cyclic condensed rings, 0-15 O atoms, 0-3 carbonyl groups or 0-5 hydroxy
 groups; R1-R4 and/or R7-R10 can be coupled via a six member arom. ring or
 they can be coupled to A, B or W; R5 and R6 are -E1, C1-C4 sulfoalkyl,
 alkylene, cycloalkylene chains; R11 and R12 are Ph rings with 1-3
 substituents of hydroxy, carboxy, sulfate, sulfonate, alkyl, alkoxy, or
 carboxylic acid). The .beta.-amyloid plaque binding biomol. A in I is one
 of the following: antibody, antibody fragment, specific peptide, protein,
 receptor, enzyme, enzyme substrate, nucleotide, RNA, DNA, lipoprotein,
 carbohydrate, saccharide, saccharide deriv., or dextran. The
 .beta.-amyloid plaque binding dye B in I is a diazo-biphenyl compd. The
 structural element W in I is from the group of the following: -OSO3H,
 -SO3H, linear, branched, satd., unsatd., cyclic, polycyclic alkyl,
 alkenyl, polyalkenyl, alkynyl, aryl, alkylaryl or arylalkyl up to 60
 carbon atoms, with substituents hydroxy, carboxy, sulfate, sulfonate.
 Coupling of part F with A, B and/or W can be via ester, ether, sec.,
 tert., amino group, amido, ureylene, thiol, etc. groups. The invention
 also includes the physiol. compatible salts of the above compds. These
 compds. are used as contrast agents for in vivo and in vitro diagnosis of
 neurodegenerative diseases such as Alzheimer's disease in combination with
 near infra-red radiation (NIR radiation) and detection of the fluorescent
 or transmitted light. Further the invention concerns a test kit,
 consisting of at least one of the I compds., the carrier, e.g.
 nitrocellulose membrane, reagents and solvents. Diagnostic agents contg.
 said components are also disclosed.
 ST contrast agent fluorescence NIR neurodegenerative disease; Alzheimer
 disease beta amyloid plaque diagnosis
 IT Imaging agents
 (contrast; ***optical*** diagnostic agents for diagnosis of
 neurodegenerative diseases by means of near infra-red radiation (NIR
 radiation))
 IT Nervous system
 (degeneration; ***optical*** diagnostic agents for diagnosis of
 neurodegenerative diseases by means of near infra-red radiation (NIR
 radiation))

IT IR radiation
(near-IR; ***optical*** diagnostic agents for diagnosis of neurodegenerative diseases by means of near infra-red radiation (NIR radiation))

IT Alzheimer's disease
Cyanine dyes
Diagnosis
Fluorescent probes
Imaging agents
Membrane filters
Test kits
(***optical*** diagnostic agents for diagnosis of neurodegenerative diseases by means of near infra-red radiation (NIR radiation))

IT Antibodies
Carbohydrates, biological studies
DNA
Enzymes, biological studies
Lipoproteins
Nucleotides, biological studies
Peptides, biological studies
Proteins, general, biological studies
RNA
Receptors
RL: ARG (Analytical reagent use); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(***optical*** diagnostic agents for diagnosis of neurodegenerative diseases by means of near infra-red radiation (NIR radiation))

IT Amyloid
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.beta.-; ***optical*** diagnostic agents for diagnosis of neurodegenerative diseases by means of near infra-red radiation (NIR radiation))

IT 9004-54-0, Dextran, biological studies
RL: ARG (Analytical reagent use); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(***optical*** diagnostic agents for diagnosis of neurodegenerative diseases by means of near infra-red radiation (NIR radiation))

IT 75-50-3D, Trimethylamine, ***complex*** with sulfur dioxide
121-44-8, reactions 499-14-9, Chondrosin 538-75-0,
N,N'-Dicyclohexylcarbodiimide 1066-33-7, Ammonium hydrogencarbonate 1109-28-0, Maltotriose 6066-82-6, N-Hydroxysuccinimide 7446-09-5D,
Sulfur dioxide, ***complex*** with trimethylamine, reactions 103192-52-5 125700-67-6 208243-29-2 208243-31-6 208243-39-4 208266-35-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(***optical*** diagnostic agents for diagnosis of neurodegenerative diseases by means of near infra-red radiation (NIR radiation))

IT 93777-14-1P 178822-77-0P 208243-29-2DP, reaction products with heparin 208243-32-7P 208243-33-8P 208243-34-9P 208243-35-0P 208243-36-1P 208243-37-2P 208243-38-3P 208243-40-7P 208266-36-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(***optical*** diagnostic agents for diagnosis of neurodegenerative diseases by means of near infra-red radiation (NIR radiation))

L6 ANSWER 44 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1998:349627 CAPLUS <<LOGINID::20060727>>
DN 129:128399
ED Entered STN: 10 Jun 1998
TI Vacuum-deposited dye films and their ***optical*** properties
AU Gritsenko, Konstantin P.; Slominsky, Yuri L.; Fedotov, Konstantin V.
CS Metal-Polymer Research Institute of Belarus Academy of Sciences, Gomel, 246652, Belarus
SO Proceedings of SPIE-The International Society for Optical Engineering (1998), 3359(Optical Diagnosis of Materials and Devices for Opto-, Micro-, and Quantum Electronics 1997), 479-483
CODEN: PSISDG; ISSN: 0277-786X
PB SPIE-The International Society for Optical Engineering
DT Journal

LA English
CC 73-4 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 36, 41, 74
AB Evapd. ***squarylium*** -based (Sq), malonitrile-based merocyanine (Mc), ***metal*** - ***complexes*** on dithiolate base (Dt), ketocyanine (Kc) and phthalocyanine (Pc) dyes form smooth films, which show high ***optical*** absorption and reflection in visible and near-IR regions. Co-deposition of polytetrafluoroethylene (PTFE) and Pc dyes showed that the films obtained consist of the PTFE matrix filled by Pc particles of 10-30 nm size. Recording on dye film was performed in ablative mode by 9 mW of semiconductor ***laser***, if PTFE sublayer was used. Three types of ***laser*** -induced hole opening mechanisms (flow motion, ***laser*** ablation, sublimation) were obtained by choosing dye and substrate with properties needed.
ST dye film vacuum deposition ***optical*** property; phthalocyanine fluoro ethylene polymer film
IT UV and visible spectra
(absorption and reflection spectra of vacuum-deposited dye films)
IT Thiols (organic), properties
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(dithiols, ***metal*** ***complexes***; ***optical*** properties of vacuum-deposited dye films)
IT Cyanine dyes
(keto and malonitrile-based mero;; ***optical*** properties of vacuum-deposited dye films)
IT ***Optical*** recording
(***laser*** -induced holes on phthalocyanine dye films)
IT IR spectra
(near-IR; absorption and reflection spectra of vacuum-deposited dye films)
IT Annealing
(***optical*** properties of phthalocyanine dye films after)
IT Fluoropolymers, properties
RL: PRP (Properties)
(***optical*** properties of phthalocyanine dye films co-deposited with polytetrafluoroethylene)
IT ***Laser*** radiation
(***optical*** recording on phthalocyanine dye films)
IT Transition ***metal*** ***complexes***
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(phthalocyanine; ***optical*** properties of dye films co-deposited with polytetrafluoroethylene)
IT Metallophthalocyanines
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(transition ***metal*** ***complexes***; ***optical*** properties of dye films co-deposited with polytetrafluoroethylene)
IT 3317-67-7, Cobalt phthalocyanine 13930-88-6 14320-04-8, Zinc phthalocyanine
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(***optical*** properties of dye films co-deposited with polytetrafluoroethylene)
IT 574-93-6, Phthalocyanine 9002-84-0, Polytetrafluoroethylene
RL: PRP (Properties)
(***optical*** properties of phthalocyanine dye films co-deposited with polytetrafluoroethylene)
IT 7440-02-0D, Nickel, dithiolate ***complexes***, properties 157207-74-4D, derivs.
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(***optical*** properties of vacuum-deposited dye films)
IT 103123-21-3 210344-60-8
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(vacuum deposition rate of films vs. temp.)

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L6 ANSWER 45 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1997:680639 CAPLUS <<LOGINID::20060727>>
 DN 127:365420
 ED Entered STN: 27 Oct 1997
 TI ***Squaraine*** -based long wavelength fluorescent chemosensors for
 ions
 AU Akkaya, Engin U.
 CS Department of Chemistry, Middle East Technical University, Ankara, 06531,
 Turk.
 SO NATO ASI Series, Series C: Mathematical and Physical Sciences (1997),
 492(Chemosensors of Ion and Molecule Recognition), 177-188
 CODEN: NSCSDW; ISSN: 0258-2023
 PB Kluwer
 DT Journal; General Review
 LA English
 CC 79-0 (Inorganic Analytical Chemistry)
 Section cross-reference(s): 25
 AB A review with 17 refs. Fluorescent chemosensors which can be excited at
 the red-end of the visible spectrum offer a no. of advantages.
 Squaraines when modified appropriately, yield such chemosensors
 signaling various ions in acetonitrile and water.
 ST ***squaraine*** deriv fluorescent ion sensor review; long wavelength
 fluorescent ion sensor review; alk earth effect ***squaraine*** sensor
 review; calcium detection ***squaraine*** fluorescent sensor review
 IT ***Optical*** sensors
 (fluorescent; ***squaraine*** -based long wavelength fluorescent
 chemosensors for ions)
 IT Alkaline earth ***metals***
 RL: PRP (Properties)
 (ions; effect on fluorescence of ***squaraine*** derivs.)
 IT Fluorescence
 (of ***squaraine*** derivs.)
 IT 7440-70-2, Calcium, analysis
 RL: ANT (Analyte); PRP (Properties); ANST (Analytical study)
 (cationic; ***squaraine*** -based long wavelength fluorescent
 chemosensors for detection of)
 IT 123756-48-9P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and fluorescence of water-sol.)
 IT 198434-19-4P
 RL: ARU (Analytical role, unclassified); PRP (Properties); SPN (Synthetic
 preparation); ANST (Analytical study); PREP (Preparation)
 (***squaraine*** -based long wavelength fluorescent chemosensors for
 alk. earth ions)
 IT 198434-20-7P
 RL: ARU (Analytical role, unclassified); PRP (Properties); SPN (Synthetic
 preparation); ANST (Analytical study); PREP (Preparation)
 (***squaraine*** -based long wavelength fluorescent chemosensors for
 calcium ion)
 IT 78675-98-6DP, ***Squaraine*** , derivs.
 RL: ARU (Analytical role, unclassified); DEV (Device component use); PRP
 (Properties); SPN (Synthetic preparation); ANST (Analytical study); PREP
 (Preparation); USES (Uses)
 (***squaraine*** -based long wavelength fluorescent chemosensors for
 ions)

RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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 Symposium Series 538 1992, P235
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- (8) Gryniewicz, G; J Biol Chem 1985, V260, P3440 CAPLUS
- (9) Isgor, Y; Submitted for publication
- (10) Law, K; Chem Phys Lett 1992, V200, P122
- (11) Law, K; Chem Rev 1993, V93, P449 CAPLUS
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L6 ANSWER 46 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1997:602510 CAPLUS <<LOGINID::20060727>>

DN 127:301317

ED Entered STN: 22 Sep 1997

TI Heat development photosensitive material with improved lightfastness

IN Harada, Toru; Fujiwara, Itsuo

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 28 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03C001-498

ICS G03C001-00; G03C001-22

CC 74-7 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09230531	A2	19970905	JP 1996-60376	19960223
PRAI	JP 1996-60376		19960223		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 09230531	ICM	G03C001-498
	ICS	G03C001-00; G03C001-22
	IPC1	G03C0001-498 [ICM,6]; G03C0001-00 [ICS,6]; G03C0001-22 [ICS,6]

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The title material contains a dye I (Z1, Z2 = nonmetal atoms required to form a 5 or 6- membered N-contg. heterocycle which may be condensed; R1, R2 = alkyl, alkenyl, aralkyl; L = linking group composed of 5, 7 or 9 methine groups linked by conjugated double bonds; a, b, c = 0 or 1; X = anion, when X is an anion contg. M in III shown below, the compd. III, IV or V is not necessary) or II (R3-10 = H, alkyl, cycloalkyl, aryl, aralkyl, R3 and R4, R5 and R6, R7 and R8, R9 and R10, R4 and R5 or R8 and R9 may form a 5 or 6-membered ring), and .gtoreq.1 compd. selected from Ln1Mm1 (III; L = ***ligand*** ; M = Ni, Co, Cu, Pt, Pd, Fe, Mn, or Zn; n1 = 1-10; m1 = 1 or 2), IV (R11-14 = H or alkyl; X = anion), and V [R15 = H, halo, CONHR22, SO2NHR22, NHSO2R22, NHCOR22, NHCONHR22 (R22 = alkyl or aryl); R16, R17 = H, alkyl, halo, NHCOR22, NHSO2R22, nonmetal atoms which link each other to form an arom. ring; R18, R19 = H, alkyl, alkoxy, OH, halo; R20, R21 = alkyl, aralkyl, atoms linking to form a heterocycle; n2 = 0-2]. The material may be used in IR ***laser*** exposure. The dyes, which remains after heat-development, shows good lightfastness, and the material gives clear images with high sharpness. Thus, a PET film was coated with an antihalation layer contg. the dye and the decoloration-preventing agent on the back side, and coated with a photosensitive emulsion layer and a protective layer successively on the

front side to give a heat development photosensitive film.

ST photothermog copying IR absorbing cyanine dye; ***squarylium*** dye
 heat developable photosensitive material; decoloration preventing agent
 photothermog copying

IT Photothermographic copying
 (heat-developable photosensitive material contg. cyanine or
 squarylium IR-absorbing dye and decoloration-preventing agent)

IT 161375-44-6 197087-00-6 197087-01-7 197087-02-8
 RL: DEV (Device component use); USES (Uses)
 (heat-developable photosensitive material contg. cyanine or
 squarylium IR-absorbing dye and decoloration-preventing agent)

IT 15186-37-5 15551-24-3 102279-09-4 111364-54-6 111532-88-8
 197087-03-9
 RL: DEV (Device component use); MOA (Modifier or additive use); USES
 (Uses)
 (heat-developable photosensitive material contg. cyanine or
 squarylium IR-absorbing dye and decoloration-preventing agent)

IT 183745-24-6P
 RL: DEV (Device component use); PNU (Preparation, unclassified); PREP
 (Preparation); USES (Uses)
 (heat-developable photosensitive material contg. cyanine or
 squarylium IR-absorbing dye and decoloration-preventing agent)

IT 177168-18-2 183744-99-2
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (prepn. of cyanine dye)

L6 ANSWER 47 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1997:347040 CAPLUS <<LOGINID::20060727>>
 DN 126:309193
 ED Entered STN: 03 Jun 1997
 TI Theoretical Aspects of Differential Reflectance and Electoreflectance
 Spectroscopy in the UV-Vis Region As Applied to the Study of Molecular
 Layers Adsorbed on ***Metal*** Surfaces
 AU Kim, Sunghyun; Wang, Zhenghao; Scherson, Daniel A.
 CS Department of Chemistry, Konkuk University, Seoul, 143-701, S. Korea
 SO Journal of Physical Chemistry B (1997), 101(14), 2735-2740
 CODEN: JPCBFK; ISSN: 1089-5647
 PB American Chemical Society
 DT Journal
 LA English
 CC 66-4 (Surface Chemistry and Colloids)
 Section cross-reference(s): 68, 73

AB Differential reflectance UV-vis spectra (.DELTA.R/R vs wavelength,
 .lambda.) of mol. layers adsorbed on various ***metal*** surfaces have
 been simulated using Fresnel equations for a stratified three-phase model
 for the interface, assuming each constituent retains its bulk
 optical properties after the interface is formed, i.e. total
 neglect of adsorbate-substrate interactions. Results obtained for
 ultrathin films (1 nm) of ***squarylium***, meso-tetrakis(Ph
 porphyrin), and ***metal***-free phthalocyanine in contact with Au,
 Pt, and the basal plane of highly oriented pyrolytic graphite have shown
 that the shape of .DELTA.R/R vs .lambda. for p-polarized light depends
 quite markedly on the angle of incidence and the ***optical*** consts.
 of the substrate. At normal incidence, the reflectance spectra displayed
 peaks similar to those obsd. in the conventional absorption spectra of the
 materials. As the angle was increased, however, the position of these
 features not only shifted, but, in certain cases, new bands emerged, which
 could not be readily ascribed to the overlayer. This indicates that under
 non-normal incidence conditions, no conclusions regarding the phys. state
 of adsorbed monolayers on ***metal*** substrates can be drawn on the
 basis of a cursory examn. of .DELTA.R/R vs .lambda. curves in this
 spectral region. These purely ***optical*** effects may also account
 for features obsd. in the electoreflectance spectra of monolayers
 irreversibly adsorbed on electrode surfaces, in which case the
 reflectivity of the substrate is modified by its state of charge.

ST electoreflectance spectroscopy adsorbed mol layer ***metal***;
 metal surface adsorbed mol layer reflectance; ***optical***
 property incidence angle differential reflectance

IT Electrolytes
 Interface
 (electoreflectance study at a three-phase ***optical*** model of
 an electrode/adsorbate/electrolyte interface)

IT Adsorbed substances
Electrooptical reflection
(***optical*** response of adsorbate/substrate interfacial systems
as a function of incidence angle)
IT 574-93-6, Phthalocyanine 917-23-7 68149-27-9
RL: PRP (Properties)
(adsorbed mol. layer; ***optical*** response of adsorbate/substrate
interfacial systems as a function of incidence angle)
IT 7440-06-4, Platinum, properties 7440-57-5, Gold, properties 7782-42-5,
Graphite, properties
RL: PRP (Properties)
(***optical*** response of adsorbate/substrate interfacial systems
as a function of incidence angle)

RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

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- (2) Dignam, M; Trans Faraday Soc 1971, V67, P3306 CAPLUS
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1973, V9, P61 CAPLUS
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- (23) Randin, J; J Electrochem Soc 1971, V118, P711 CAPLUS
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Methods of Chemistry IXB, 2nd ed, Chapter 7 1993
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- (30) Yeh, P; J Opt Soc Am 1979, V69, P742
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L6 ANSWER 48 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1996:680783 CAPLUS <<LOGINID::20060727>>

DN 126:52258

ED Entered STN: 18 Nov 1996

TI Attenuated total reflection properties and structures in
squarylium LB films

AU Kaneko, Futao; Honda, Syosaku; Fukami, Tetsuo; Kato, Keizo; Wakamatsu,
Takashi; Shinbo, Kazunari; Kobayashi, Satoshi

CS Department of Electrical and Electronic Engineering, Niigata University,
Ikarashi 2-8050, Niigata, 950-21, Japan

SO Thin Solid Films (1996), 284-285, 417-419

CODEN: THSFAP; ISSN: 0040-6090

PB Elsevier

DT Journal

LA English

CC 73-2 (Optical, Electron, and Mass Spectroscopy and Other Related
Properties)

Section cross-reference(s): 66, 76

AB The attenuated total reflection (ATR) properties, as a function of the
incident angle of the ***laser*** beam, were studied for
squarylium (SQ) Langmuir-Blodgett (LB) films on thin Ag layers.
Photosensitive SQ dyes exhibit strong absorption in the visible. The ATR
curves are strongly dependent on the no. of LB monolayers; the resonant

angles at the dips increase with increasing no. of monolayers. The
 complex dielec. consts. of the LB films (uniaxial anisotropic
 dielecs.) were detd. by fitting the theor. ATR curves to the exptl.
 curves. The ATR properties suggest that the tilt angles of the long axes
 of the chromophores in the SQ mols. are .apprx.10.degree. from the LB film
 plane for two layers and .apprx.30.degree. for more than four layers.
 Since H aggregation of SQ mols. in LB films is generated on annealing and
 the absorption spectra change, the ATR properties were also studied for
 annealed SQ LB films. The properties are of interest for ***optical***
 applications.

ST attenuated total reflection ***squarylium*** LB film; Langmuir
 Blodgett film dielec const

IT Dielectric constant
 (attenuated total reflection and dielec. properties and structures in
 squarylium LB films with silver layer)

IT ATR (attenuated total reflection)
 Agglomeration
 Langmuir-Blodgett films
 (attenuated total reflection properties and structures in
 squarylium LB films with silver layer)

IT Annealing
 (attenuated total reflection properties and structures in
 squarylium LB films with silver layer affected by annealing)

IT 7440-22-4, Silver, uses
 RL: NUJ (Other use, unclassified); USES (Uses)
 (attenuated total reflection properties and structures in
 squarylium LB films with silver layer)

IT 106802-96-4
 RL: PRP (Properties)
 (attenuated total reflection properties and structures in
 squarylium LB films with silver layer)

L6 ANSWER 49 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1995:695627 CAPLUS <<LOGINID::20060727>>
 DN 123:182654
 ED Entered STN: 22 Jul 1995
 TI Third harmonic spectral dispersion of ***squaraines***
 AU Andrews, James H.; Khaydarov, John D. V.; Singer, Kenneth D.; Hull, Diana
 L.; Chuang, Kathy C.
 CS Dep. Phys., Case Western Res. Univ., Cleveland, OH, 44106-7079, USA
 SO Polymer Preprints (American Chemical Society, Division of Polymer
 Chemistry) (1994), 35(2), 112-13
 CODEN: ACPPAY; ISSN: 0032-3934
 PB American Chemical Society, Division of Polymer Chemistry
 DT Journal
 LA English
 CC 73-10 (Optical, Electron, and Mass Spectroscopy and Other Related
 Properties)

AB The authors work is intended to test the strength, location, and purity of
 the lowest-lying two-photon transition by fitting the measured dispersion
 of γ in the vicinity of the 21Ag two-photon resonance to a
 sum-over-states model with a min. no. of levels consistent with the linear
 absorption spectrum of the dye. The authors use third harmonic generation
 to probe the sign and magnitude of the near-resonant contribution found in
 the D121 denominator at $\omega_2 = 2\omega_1$ because it does not require
 detection of the output signal at a highly absorbed frequency. The
 authors have measured the third- harmonic response of the
 squaraine dyes, ISQ and C16-TSQ, shown with their absorption
 spectra in chloroform. The authors measurements were made over a range of
 fundamental frequencies ($\omega_1 = 1.15-1.16 \mu\text{m}$) for which the third
 harmonic is energetically above the exceptionally strong, yet relatively
 narrow, absorption peak in each dye's linear absorption spectra (at 654 nm
 for ISQ and 668 nm for C16-TSQ), but generally below the UV absorption
 band which begins for each dye around 400 nm. With both dyes, the authors
 find that the 21Ag state appears just above the 11Bu state in energy and
 has a transition moment from the first excited state that is moderately
 smaller than that between the ground and 11Bu state. The location and
 width of the 21Ag state varies little in any of the authors fits,
 regardless of the strength of μ_{01} or the parameters of the high-lying
 two-photon states. The uncertainty in μ_{01} is almost entirely detd. by
 the uncertainty in μ_{01} . The 21Ag transition moments detd. by the
 authors exptl. fits are almost an order of magnitude larger than that

predicted by Q. L. Zhou et al. (1993) for a similar
 dye ($\mu_{12} = -0.34$ Debye) using quantum chem. calcns.
 Those calcns. predict large two-photon transition moments (apprx. 10
 Debye) only for high-lying two-photon states (the 31A9, 41Ag, or 51Ag
 states in the UV). The authors find that the 21Ag state plays a
 significant role in detg. the shape of the nonlinear dispersion for third
 harmonic generation throughout this wavelength region. The authors
 measurements confirm the predictions of Pierce and Zhou that high-lying
 two photon states must be included in modeling for these materials. With
 respect to both ISQ and C16-TSQ, the authors find at least one high-lying
 two-photon state is required to fit the data. The parameters of the
 higher-lying two-photon states are not well detd. by the fits to the data.
 However, it is seen that all reasonable fits to high-lying two-photon
 states merely contribute a relatively const. imaginary part to γ . in
 the spectral region of the authors measurements. While the authors
 measurements precisely characterize the 21Ag state, further measurements
 are needed to characterize the higher-lying two-photon states.

ST third harmonic spectra dispersion ***squaraine*** dye
 IT Dyes
 (***squaraine*** ; third harmonic spectral dispersion of
 squaraines)
 IT Ultraviolet and visible spectra
 (third harmonic spectral dispersion of ***squaraines***)
 IT ***Optical*** nonlinear property
 (third-harmonic generation, third harmonic spectral dispersion of
 squaraines)
 IT 68842-68-2 123778-84-7
 RL: PRP (Properties)
 (third harmonic spectral dispersion of ***squaraines***)

L6 ANSWER 50 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1995:232587 CAPLUS <<LOGINID::20060727>>
 DN 122:199935
 ED Entered STN: 08 Dec 1994
 TI ***Squaraine*** chemistry: effects of solvent and temperature on the
 fluorescence emission of ***squaraines***
 AU Law, Kock-Yee
 CS Xerox Webster Research Center, 800 Phillips Road, 0114-39D, Webster, NY,
 14580, USA
 SO Journal of Photochemistry and Photobiology, A: Chemistry (1994), 84(2),
 123-32
 CODEN: JPPCEJ; ISSN: 1010-6030
 PB Elsevier
 DT Journal
 LA English
 CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related
 Properties)
 Section cross-reference(s): 74
 AB The ***squaraines*** - a class of donor-acceptor mol. exhibit intense
 multiple fluorescence in the visible region. The three emission bands,
 designated α , β , and γ . in the order of decreasing energy,
 were found to be emissions from the excited state of ***squaraine*** ,
 the excited state of the solute-solvent ***complex*** and a relaxed,
 twisted excited state resp. The effects of the solvent and temp. on the
 absorption and fluorescence emission of bis(4-dibutylaminophenyl)
 squaraine are reported. The data confirm that ***squaraine***
 forms solute-solvent ***complexes*** in solvents. Evidence is
 provided that the solute-solvent interaction is short range, and that
 polar solvents usually exert a bathochromic effect on the absorption max.
 wavelength λ_{max} . Along with the bathochromic shift, a gradual
 change in the compn. of the emission band, from being dominated by the
 α . emission in ether to being dominated by the β . emission in
 polar solvents, is obsd. Both λ_{max} and K_{eq} (the equil. const. for
 complexation) are shown to correlate well with the solvent
 parameter π^* . The results indicate that the solute-solvent
 complexation process is responsible for the bathochromic shift in
 λ_{max} and the compn. change in the emission spectra. This
 conclusion is supported by variable and low temp. spectral data. While
 the lifetime of excited 1 is shown to be independent of the solvent
 (2.3 \pm 0.1 ns), the lifetimes of the excited solute-solvent
 complex and the relaxed, twisted excited state are solvent
 sensitive, varying from 0.6 to 3.5 ns and 0.7 to 2.9 ns resp. From the

fluorescence lifetime and the radiative decay rate, the rate of the radiationless decay, which involves rotation of the C-C bond between the Ph ring and the four-membered ring of ***squaraine***, can be calcd. The rotation rate is shown to increase rapidly as the twisting of the ***squaraine*** chromophore increases. The intensity of the .gamma. emission can be inhibited not only by lowering the temp. but also by a rigid polymer matrix at room temp. The results support the postulation that a twisting motion is required for the generation of the relaxed excited state.

ST solvent temp effect fluorescence ***squaraine*** photophys
IT Fluorescence
Optical absorption
Solvent effect
(effects of solvent and temp. and solute-solvent ***complexation***
on fluorescence emission of ***squaraines***)

IT 99663-97-5, Bis(4-dibutylaminophenyl) ***squaraine***
RL: PEP (Physical, engineering or chemical process); PRP (Properties);
PROC (Process)
(effects of solvent and temp. on the fluorescence emission of
squaraines)

IT 60-29-7, Diethyl ether, properties 64-17-5, Ethanol, properties
67-63-0, 2-Propanol, properties 67-64-1, Acetone, properties 67-66-3,
Chloroform, properties 68-12-2, DMF, properties 71-23-8, 1-Propanol,
properties 71-36-3, 1-Butanol, properties 71-41-0, 1-Pentanol,
properties 71-43-2, Benzene, properties 71-55-6, 1,1,1-Trichloroethane
75-05-8, Acetonitrile, properties 75-09-2, Methylene chloride,
properties 75-85-4, tert-Pentanol 78-93-3, Methyl ethyl ketone,
properties 79-00-5, 1,1,2-Trichloroethane 106-42-3, p-Xylene,
properties 107-06-2, 1,2-Dichloroethane, properties 108-88-3, Toluene,
properties 109-99-9, Tetrahydrofuran, properties 111-27-3, 1-Hexanol,
properties 111-70-6, 1-Heptanol 123-51-3, Isopentanol 123-86-4,
Butyl acetate 123-91-1, 1,4-Dioxane, properties 141-78-6, Ethyl
acetate, properties 584-02-1, 3-Pentanol 6032-29-7, 2-Pentanol
9003-53-6, Polystyrene
RL: PEP (Physical, engineering or chemical process); PRP (Properties);
PROC (Process)
(solvent effect of; effects of solvent and temp. and solute-solvent
complexation on fluorescence emission of ***squaraines***)

L6 ANSWER 51 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1994:544727 CAPLUS <<LOGINID::20060727>>
DN 121:144727
ED Entered STN: 17 Sep 1994
TI Negative third order ***optical*** susceptibilities of
squaraines

AU Shi, R. F.; Zhou, Q. L.; Garito, A. F.
CS Dep. Phys., Univ. Pennsylvania, Philadelphia, PA, 19104, USA
SO Materials Research Society Symposium Proceedings (1994), 328(Electrical,
Optical, and Magnetic Properties of Organic Solid State Materials), 643-8
CODEN: MRSPDH; ISSN: 0272-9172

DT Journal
LA English
CC 73-10 (Optical, Electron, and Mass Spectroscopy and Other Related
Properties)
Section cross-reference(s): 22

AB Quantum many-electron calcns. based on multiple-excited CI were
implemented on ***squaraine*** mols. Certain ***squaraines***
possess neg. 3rd order ***optical*** susceptibilities (.gamma.) even
in the zero frequency limit. The calcns. agree with the exptl. results
obtained by C.W. Dirk et ***al*** . (1992) for anilinium
squarylium in terms of the sign and magnitude. High-lying
2-photon states in ***squaraines*** are always critically important.
The sign of .gamma. depends on the electron donating ability of the 2 side
groups in ***squaraines*** .

ST ***squaraine*** third order nonlinear ***optical***
IT Quantum chemistry
(CI, of ***squaraines*** , third order nonlinear susceptibilities in
relation to)

IT ***Optical*** nonlinear property
(susceptibility, third-order, neg., of ***squaraines***)

IT 157207-74-4
RL: USES (Uses)

(. third order ***optical*** nonlinear susceptibilities of)
 IT 63842-83-1 84688-00-6
 RL: USES (Uses)
 (neg. third order ***optical*** nonlinear susceptibilities of)

L6 ANSWER 52 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1993:681974 CAPLUS <<LOGINID::20060727>>
 DN 119:281974
 ED Entered STN: 25 Dec 1993
 TI Photochemistry of ***squaraine*** dyes. 5. Aggregation of
 bis(2,4-dihydroxyphenyl) ***squaraine*** and bis(2,4,6-
 trihydroxyphenyl) ***squaraine*** and their photodissociation in
 acetonitrile solutions
 AU Das, Suresh; Thanulingam, T. Lekshmana; Thomas, K. George; Kamat, Prashant
 V.; George, M. V.
 CS Reg. Res. Lab., CSIR, Trivandrum, 695 019, India
 SO Journal of Physical Chemistry (1993), 97(51), 13620-4
 CODEN: JPCHAX; ISSN: 0022-3654
 DT Journal
 LA English
 CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 Section cross-reference(s): 41
 AB The equil. consts. and thermodyn. parameters for aggregate formation of
 bis(2,4-dihydroxyphenyl)- ***squaraine*** and bis(2,4,6-
 trihydroxyphenyl) ***squaraine*** have been studied by absorption
 spectroscopy. The values of the equil. const., K, for the dimerization of
 SQ1 and SQ2 in acetonitrile at 300 K are (3.1 +/- 0.3) .times. 10⁵ M⁻¹
 and (2.19 +/- 0.14) .times. 10⁵ M⁻¹, resp. Iodine enhances the
 aggregation process. This has been attributed to the formation of
 charge-transfer ***complexes*** between iodine and the dyes and the
 stronger tendency of these ***complexes*** to form aggregates.
 Excitation of the ***squaraine*** dimer with a 532-nm ***laser***
 pulse leads to the formation of the excited singlet state of monomeric dye
 as the excited dimer dissoc. within the ***laser*** pulse duration of
 18 ps.
 ST photochem ***squaraine*** dye aggregation photodissocn acetonitrile;
 dimerization ***squaraine*** dye charge transfer ***complex***
 IT Photochemistry
 (of ***squaraine*** dyes, aggregation in)
 IT Dimerization
 Molecular association
 Charge-transfer ***complexes***
 Dimers
 RL: USES (Uses)
 (of ***squaraine*** dyes, photochem. of)
 IT Ultraviolet and visible spectra
 (of ***squaraine*** dyes, photochem. of, aggregation in)
 IT Dyes
 (***squaraine*** , photochem. of, aggregation in)
 IT Photolysis
 (flash, picosecond, of ***squaraine*** dyes, aggregation in)
 IT 3588-89-4 19205-48-2
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (photochem. of, aggregation in)

L6 ANSWER 53 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1992:72474 CAPLUS <<LOGINID::20060727>>
 DN 116:72474
 ED Entered STN: 21 Feb 1992
 TI ***Optical*** recording media
 IN Santo, Takeshi; Mihara, Chieko; Sugata, Hiroyuki
 PA Canon K. K., Japan
 SO Jpn. Kokai Tokkyo Koho, 22 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM B41M005-26
 ICS G11B007-24
 CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 03126581	A2	19910529	JP 1989-266966	19891012
	JP 3015053	B2	20000228		
PRAI	JP 1989-266966		19891012		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 03126581	ICM	B41M005-26
	ICS	G11B007-24
	IPCI	B41M0005-26 [ICM,5]; G11B0007-24 [ICS,5]

GI

/ Structure 26 in file .gra /

AB The title ***laser*** ***optical*** media with improved heat and light resistance and long-term storability contain ***squarylium*** dyes I and/or croconium dyes II (A+ = org. cation group; B = org. group) and a carboxylic acid ***metal*** ***complex*** .

ST ***laser*** recording medium ***squarylium*** croconium dye; ***metal*** carboxylate ***laser*** recording medium

IT Carboxylic acids, compounds
RL: USES (Uses)
(aryl, salts, ***laser*** ***optical*** recording media contg. dyes and, light- and heat-resistant, storable)

IT Recording materials
(***optical*** , ***squarylium*** and croconium dyes and ***metal*** carboxylates for, light- and heat-resistant, storable)

IT 43134-05-0 72939-79-8 88513-97-7 88878-49-3 90550-62-2
93072-17-4 127476-15-7 138496-68-1 138496-69-2 138521-69-4
138590-52-0
RL: USES (Uses)
(***laser*** ***optical*** recording media, contg. ***metal*** carboxylates, light- and heat-resistant, storable)

IT 2880-85-5 6228-53-1 16283-36-6 42494-53-1 105636-59-7
122012-47-9 131840-56-7 138496-24-9 138496-25-0 138590-53-1
138590-54-2
RL: USES (Uses)
(***squarylium*** and croconium dye-based ***optical*** recording media contg., light- and heat-resistant, storable)

L6 ANSWER 54 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1991:594192 CAPLUS <<LOGINID::20060727>>

DN 115:194192

ED Entered STN: 01 Nov 1991

TI Electrophotographic photoconductors

IN Akao, Yuji; Fujimori, Mizue; Ozawa, Yoshiyuki; Yamada, Yorinobu

PA Citizen Watch Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03G005-06

ICS C09B023-00; C09B047-04; G03G005-06

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 03078759	A2	19910403	JP 1989-215332	19890822
PRAI	JP 1989-215332		19890822		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 03078759	ICM	G03G005-06
	ICS	C09B023-00; C09B047-04; G03G005-06
	IPCI	G03G0005-06 [ICM,5]; C09B0023-00 [ICS,5]; C09B0047-04 [ICS,5]; G03G0005-06 [ICS,5]

OS MARPAT 115:194192

GI

AB Charge carrier-generating layer of the photoconductors contain
squarylium compds. I [R1-2 = C1-10 (branched) alkyl] and Cu
phthalocyanine II. This combination provides much increased sensitivity,
esp. in wavelength region of semiconductor ***laser***. Thus, a
photoconductor having an ***Al*** substrate, a charge
carrier-generating layer contg. equimol. mixt. of I (R1-2 = Me) and II and
polyester, and a charge carrier-transporting layer contg.
p-diethylaminobenzaldehyde diphenylhydrazone and polycarbonate showed
sensitivity (lux-s required for half decay of voltage) 0.35, 0.45 and
0.63, at 850 nm, 800 nm, and 750 nm, resp.

ST ***squarylium*** compd phthalocyanine electrophotog photoconductor
IT Electrophotographic photoconductors
(charge-generating agents for, ***squarylium*** compds. and
phthalocyanine as, for high sensitivity to semiconductor ***laser***
)

IT 43134-09-4
RL: USES (Uses)
(charge-generating layer of electrophotog. photoconductor contg. copper
phthalocyanine and)

IT 147-14-8
RL: USES (Uses)
(charge-generating layer of electrophotog. photoconductor contg.
squarylium compd. and)

L6 ANSWER 55 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1991:418366 CAPLUS <<LOGINID::20060727>>
DN 115:18366
ED Entered STN: 12 Jul 1991
TI ***Laser*** printer application [of infrared-absorbing dyes]
AU Kakuta, Atsushi
CS Res. Lab., Hitachi Ltd., Hitachi, 319-12, Japan
SO Infrared Absorbing Dyes (1990), 155-71. Editor(s): Matsuoka, Masaru.
Publisher: Plenum, New York, N. Y.
CODEN: 57DDA2
DT Conference; General Review
LA English
CC 74-0 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

AB The present status of development and utilization of org. pigment
materials for diode- ***laser*** printers was surveyed. The materials
can be divided into : phthalocyanines, azo pigments, ***squaraine***
pigments, perylene pigments, aggregated pigments, and others. The
phthalocyanines are the oldest and still the most widely applied in
photoreceptors. They are of 2 types: conventional ***metal*** -free or
bivalent ***metal*** phthalocyanines transformed to a special crystal
structure and tri- or tetravalent ***metal*** phthalocyanines having
intrinsic near-IR absorptions. The polyazo pigments are popular coloring
agents and are com. used as visible-sensitive photoreceptors for copiers.
To apply them to diode ***lasers***, bond conjugation in the mol.
structures must be expanded and special trisazo pigments have to be
designed and synthesized. These pigments are also applied in printers.
Squaraine pigments are newcomers and have no counterpart among
practical coloring agents. They also show quite strong absorbance in the
near-IR region and are being marketed. Perylene pigments are conventional
coloring agents; however, because of their mol. structures, it is still
hard to achieve a sufficiently strong near-IR absorption. The aggregated
type introduces a novel aspect of org. photoreceptors. This type is
available for copiers or LED printers, but it needs to be modified for
diode- ***laser*** use. Other types of pigments are also being
actively developed and their application in printers tested. These
include pyrrolopyrrole types or azulenium types. 59 Refs.

ST review electrophotog photoconductor IR absorbing dye; ***laser***
printer photoreceptor IR dye review
IT Electrophotographic photoconductors
(IR absorbing dyes in diode- ***laser*** printers in relation to)

IT Dyes
(IR-absorbing, as photoreceptors in diode ***laser*** printers)

IT Electrophotography
(app., IR absorbing dyes in diode- ***laser*** printers in relation to)

L6 ANSWER 56 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1991:104352 CAPLUS <<LOGINID::20060727>>
DN 114:104352
ED Entered STN: 23 Mar 1991
TI The role of excited singlet molecular oxygen in the photodegradation of functional ***squarylium*** dyes
AU Kuramoto, Nobuhiro
CS Osaka Prefect. Ind. Technol. Res. Inst., Osaka, 550, Japan
SO Journal of the Society of Dyers and Colourists (1990), 106(5-6), 181-6
CODEN: JSDCAA; ISSN: 0037-9859
DT Journal
LA English
CC 41-8 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
AB Stern-Volmer anal. and competitive photo-oxidn. expts. of some ***squarylium*** dyes with Ni bis(dithiobenzil), an efficient singlet O quencher, were carried out in CHCl₃ soln. and cellulose acetate film in order to study the photodegradn. mechanism of the dyes for ***optical*** data storage systems. From both sets of expts. the photodegradn. reactions of ***squarylium*** dyes involved oxidn. by singlet O in a self-sensitized process, and singlet O quenchers such as Ni dithiolato ***complexes*** had an inhibiting effect on the photoreaction of the dyes. The relative rate consts. for the reaction with singlet O from the competitive photo-oxidn. expts. were detd. The use of singlet O quenchers was effective for improving the light fastness of thin layers of ***squarylium*** dyes on polycarbonate substrates.
ST ***squarylium*** dye photodegradn mechanism; singlet oxygen photodegradn
squarylium dye; nickel dithiolate singlet oxygen quencher
IT Polycarbonates, uses and miscellaneous
RL: USES (Uses)
(films, ***squarylium*** dyes in, photodegradn. of, role of excited singlet mol. oxygen in)
IT Photolysis
(of ***squarylium*** dyes, role of excited singlet mol. oxygen in)
IT Dyes
(***squarylium*** compds., photodegradn. of, role of excited singlet mol. oxygen in)
IT Fading
(photochem., of ***squarylium*** dyes, role of singlet mol. oxygen in)
IT 9004-35-7, Cellulose acetate
RL: USES (Uses)
(films, ***squarylium*** dyes in, photodegradn. of, role of excited singlet mol. oxygen in)
IT 43134-05-0 63842-82-0 68842-66-0 98987-53-2 123132-73-0
132365-72-1 132458-73-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(photodegradn. of, role of excited singlet mol. oxygen in)
IT 28984-20-5 100597-01-1
RL: USES (Uses)
(singlet oxygen quencher, photodegradn. of ***squarylium*** dyes in presence of)
IT 7782-44-7, Oxygen, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(singlet, in photodegradn. of ***squarylium*** dyes)

L6 ANSWER 57 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1990:189145 CAPLUS <<LOGINID::20060727>>
DN 112:189145
ED Entered STN: 12 May 1990
TI ***Optical*** recording medium comprising alkyl-substituted ***squarylium*** dye
IN Arakawa, Seiichi; Tomimuro, Hiroshi
PA Sony Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF

DT Patent
LA Japanese
IC ICM B41M005-26
ICS G11B007-24
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 01178494	A2	19890714	JP 1988-2019	19880108
PRAI	JP 1988-2019		19880108		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 01178494	ICM	B41M005-26
	ICS	G11B007-24
	IPCI	B41M0005-26 [ICM,4]; G11B0007-24 [ICS,4]

OS MARPAT 112:189145

GI

/ Structure 28 in file .gra /

AB The ***optical*** recording medium has a recording layer contg. a
squarylium dye deriv. of the structure I (R, R1 = alkyl; R2 = H,
alkyl). The dye has the desirable soly. in org. solvents for prep. a
coating soln. and the dye layer is superior in ***optical***
properties, such as absorption coeffs. and surface reflectance. Thus, a
CHCl3 soln. of the ***squarylium*** dye I (R = Et; R1 = Me2CHCH2; R2 =
Me2CH) was spin-coated on a glass plate to form a recording layer, which
gave a max. reflectance of 30% at a thickness of ca. 65 nm. Recording and
reading out of ***information*** were carried out with a 60 nm-thick
recording layer by irradiating a 780 nm beam from a semiconductor pulsed
laser operated at a recording power of 10 mW and a scanning rate
of 5 m/s to give a carrier-to-noise ratio in rerecording of 46-50 dB
relative to a pulse frequency of 1-4 MHz. Variation of the alkyl
substituents on the framework of I indicated exptl. that introduction of a
bulky substituent (esp. for R1) gave a higher coeff. of absorption.
Lightfastness of the dye examd. also depended on the kind of the
substituents and tended to be lowered by use of a bulky substituent. The
fastness was however shown to be largely improved by adding to the dye
layer a singlet oxygen quencher, such as a Ni ***complex*** deriv.

ST ***optical*** recording layer heat mode; ***squarylium*** dye
alkyl deriv recording; quinaldine intermediate synthesis

IT ***squarylium*** dye; singlet oxygen quencher nickel ***complex***
Recording materials
(***optical*** , alkyl-substituted ***squarylium*** dyes for,
with good lightfastness)

IT 43134-04-9 126492-64-6 126492-65-7 126492-66-8 126492-67-9
126492-68-0 126492-69-1
RL: USES (Uses)
(***optical*** recording material contg. film of)

IT 75403-25-7P 126572-50-7P 126572-51-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(prepn. and reaction of, ***squarylium*** dye from, for
optical recording material)

IT 126492-76-0P
RL: PREP (Preparation)
(prepn. of, for ***optical*** recording material)

IT 79-31-2 769-92-6, p-tert-Butylaniline 2892-51-5, Squaric acid
4170-30-3, Crotonaldehyde
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, ***squarylium*** dye from, for ***optical***
recording material)

ED Entered STN: 21 Jan 1989
 TI Organic thin films and their preparations
 IN Fu, Ryujun; Kin, Ishi; Furuki, Makoto; Sato, Yoko
 PA Fuji Xerox Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 9 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM G03G005-06
 ICS B41M005-26; H01L031-08
 CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 63151957	A2	19880624	JP 1986-297551	19861216
	JP 08022618	B4	19960306		
PRAI	JP 1986-297551		19861216		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 63151957	ICM	G03G005-06
	ICS	B41M005-26; H01L031-08
	IPCI	G03G0005-06 [ICM,4]; B41M0005-26 [ICS,4]; H01L0031-08 [ICS,4]
	IPCR	G03G0005-06 [I,A]; G03G0005-06 [I,C*]; H01L0051-05 [N,C*]; H01L0051-30 [N,A]
	ECLA	G03G005/06B4B; G03G005/06B7

OS MARPAT 110:31505
 GI

/ Structure 29 in file .gra /

AB The films contain ***squarylium*** dyes I(R1, R2 = alkyl). The films are prepd. by forming an ultra-thin layer contg. I on water surface and contacting a substrate with the formed layer. The films are useful as electrophotog. photoreceptors, ***optical*** recording materials, etc. Thus, a CHCl3 soln. of I(R1 = Me, R2 = Et) was dropped on water surface, CHCl3 was evapd., and an ultra-thin film of I was formed by surface tension control. An ***Al*** cylinder was dipped in water, perpendicular to the formed film, for 20 times to give a charge-generating layer, on a charge-transporting layer to give an electrophotog. photoreceptor. Clear copy images were repeatedly obtained by using the photoreceptor.

ST Langmuir-Blodgett film ***squarylium*** dye; electrophotog photoreceptor ***squarylium*** dye film

IT Electrophotographic photoconductors
 (***squarylium*** dye thin films as, formation of, by Langmuir-Blodgett method)

IT Recording materials
 (***optical*** , ***squarylium*** dye thin films as, formation of, by Langmuir-Blodgett method)

IT 94750-69-3 116450-54-5 118188-91-3 118188-92-4 118188-93-5
 118188-94-6 118188-95-7 118188-96-8 118188-97-9 118188-98-0
 RL: USES (Uses)
 (Langmuir-Blodgett film, for electrophotog. photoreceptors and ***optical*** recording materials)

L6 ANSWER 59 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1989:31504 CAPLUS <<LOGINID::20060727>>
 DN 110:31504
 ED Entered STN: 21 Jan 1989
 TI Organic thin films and their preparations
 IN Fu, Ryujun; Kin, Ishi; Furuki, Makoto; Sato, Yoko
 PA Fuji Xerox Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DT Patent

LA Japanese
IC ICM G03G005-06
ICS B41M005-26; H01L031-08
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 63151956	A2	19880624	JP 1986-297549	19861216
	JP 08022617	B4	19960306		
PRAI	JP 1986-297549		19861216		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 63151956	ICM	G03G005-06
	ICS	B41M005-26; H01L031-08
	IPCI	G03G0005-06 [ICM,4]; B41M0005-26 [ICS,4]; H01L0031-08 [ICS,4]
	IPCR	G03G0005-06 [I,A]; G03G0005-06 [I,C*]; H01L0051-05 [N,C*]; H01L0051-30 [N,A]
	ECLA	G03G005/06B4B; G03G005/06B7

OS MARPAT 110:31504

GI

/ Structure 30 in file .gra /

AB The films contain ***squarylium*** dyes I (R = alkyl). The films are
prepd. by forming a monomol. layer contg. I on water surface and
contacting a substrate with the formed layer. The films are useful as
electrophotog. photoreceptors, ***optical*** recording materials, etc.
Thus, a CHCl₃ soln. of I(R = Me) was dropped on water surface, CHCl₃ was
evapd., and an ultra-thin film of I was formed by surface tension control.
An ***Al*** cylinder was dipped in water, perpendicular to the formed
film, for 20 times to give a charge-generating layer, on a
charge-transporting layer to give an electrophotog. photoreceptor. Clear
copy images were repeatedly obtained by using the photoreceptor.

ST Langmuir-Blodgett film ***squarylium*** dye; electrophotog
photoreceptor ***squarylium*** dye film

IT Electrophotographic photoconductors
(***squarylium*** dye thin films as, formation of, by
Langmuir-Blodgett method)

IT Recording materials
(***optical*** , ***squarylium*** dye thin films as, formation
of, by Langmuir-Blodgett method)

IT 43134-09-4 82930-30-1 99663-97-5 105810-36-4 118189-00-7
118189-01-8 118189-02-9 118189-03-0

RL: USES (Uses)

(Langmuir-Blodgett film, for electrophotog. photoreceptors and
optical recording materials)

L6 ANSWER 60 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1987:626060 CAPLUS <<LOGINID::20060727>>

DN 107:226060

ED Entered STN: 12 Dec 1987

TI ***Optical*** recording medium

IN Ozawa, Tetsuo; Maeda, Shuichi; Kurose, Yutaka; Iwanami, Junko

PA Mitsubishi Chemical Industries Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM B41M005-26

ICS G11B007-24

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62124987	A2	19870606	JP 1985-265016	19851127
PRAI	JP 1985-265016		19851127		

CLASS	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	JP 62124987	ICM	B41M005-26
		ICS	G11B007-24
		IPCI	B41M0005-26 [ICM,4]; G11B0007-24 [ICS,4]
		IPCR	G11B0007-24 [I,C*]; G11B0007-244 [I,A]; G11B0007-248 [I,A]

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The title ***optical*** recording medium a has a recording layer contg. a ***squarylium*** deriv. of the formula I [R1-R7, R11-R17 = H, org. group; and the org. groups may form (un)substituted ring(s)] and a phthalocyanine deriv. of the formula II [A, B = H, org. group which may form (un)substituted ring(s); M = IB, IIB, IIA, IIIB, IIIA, IVB, IVA, VB, VA, VIII ***metal*** or group of atoms contg. the ***metal***]. The recording layer is easily coated. The above medium shows improved storage stability and recording sensitivity.

ST ***optical*** recording ***squarylium*** phthalocyanine;
laser recording medium

IT Recording materials
(***optical*** , contg. phthalocyanine deriv. and ***squarylium*** deriv.)

IT 72939-79-8 105922-37-0 105978-08-3 105978-10-7 105978-13-0
106028-78-8 106028-81-3 106028-90-4 106048-73-1 106048-82-2
106048-85-5 111406-77-0 111406-78-1 111406-79-2 111406-80-5
111406-81-6 111406-82-7

RL: USES (Uses)

(***optical*** recording medium contg. phthalocyanine deriv. and, for improved storage stability)

IT 83218-79-5 106923-77-7 109709-91-3 109738-14-9 109738-16-1
111405-54-0 111405-55-1 111405-56-2 111405-57-3 111405-58-4
111405-60-8 111405-61-9 111405-62-0 111405-63-1 111405-64-2
111523-60-5

RL: USES (Uses)

(***optical*** recording medium contg. ***squarylium*** deriv. and, for improved storage stability)

IT 105978-12-9P 111406-76-9P 111432-19-0P

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. and use of, for ***optical*** recording medium)

IT 1317-36-8, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with (ethylbromophenoxy)phthalonitrile, ***optical*** recording medium contg. phthalocyanine compd. from)

IT 2892-51-5

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with butylisopropylazulene, ***optical*** recording material contg. ***squarylium*** compd. from)

IT 99287-83-9

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with dihydroxycyclobutenedione, ***optical*** recording medium contg. ***squarylium*** compd. from)

IT 111430-05-8

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with lead monoxide, recording medium contg. phthalocyanine compd. from)

L6 ANSWER 61 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1987:224579 CAPLUS <<LOGINID::20060727>>

DN 106:224579

ED Entered STN: 26 Jun 1987

TI Heat-mode ***laser*** recording medium

IN Morinaka, Akira; Yoshida, Takuji; Oikawa, Shigeru

PA Nippon Telegraph and Telephone Public Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese
IC ICM G11B007-24
ICS B41M005-26; G03C001-72
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 61239444	A2	19861024	JP 1985-80669	19850415
PRAI	JP 1985-80669		19850415		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 61239444	ICM	G11B007-24
	ICS	B41M005-26; G03C001-72
	IPCI	G11B0007-24 [ICM,4]; B41M0005-26 [ICS,4]; G03C0001-72 [ICS,4]
	IPCR	B41M0005-26 [I,A]; B41M0005-26 [I,C*]; G03C0001-72 [I,A]; G03C0001-72 [I,C*]; G11B0007-24 [I,A]; G11B0007-24 [I,C*]

AB A heat-mode ***laser*** recording medium contains (1) an org. thermochromic system which exhibits a max. coloration state and a lower coloration state resulting from further heating of the max. coloration state (both states being stable at room temp.) and shows a reversible transition between the 2 states upon irradiation with a ***laser*** beam, and (2) a light absorber which is used for raising the temp. rapidly. The above thermochromic material is a mixture of a leuco dye and a solid organic acid. The above light absorber may be a mixture of Te, Bi, In, Se, Ge, V phthalocyanine, ***Al*** phthalocyanine, bis(cis-1,2-ditolylethylene-1,2-dithiolato)nickel, bis(1-chloro-3,4-dithiophenolato)nickel, dimethylaminophenol ***squarylium***, and diethylaminophenol ***squarylium***. A glass support was coated with a composition containing crystal violet lactone, phenolphthalein, and V phthalocyanine to give a ***laser*** recording disk in which recording and erasing were effected by using a semiconductor ***laser***.

ST ***optical*** recording thermochromic disk; ***laser*** recording disk; leuco dye thermochromic material recording

IT Thermochromic substances

(leuco dye-color developer acid mixtures as, ***optical*** recording materials from)

IT Recording materials

(***optical***, heat-mode ***laser*** sensitive, composition containing thermochromic materials)

IT 574-93-6D, aluminum ***complexes*** 7429-90-5D, ***complexes*** with phthalocyanine 7440-31-5, Tin, uses and miscellaneous 7440-56-4, Germanium, uses and miscellaneous 7440-69-9, Bismuth, uses and miscellaneous 7440-74-6, Indium, uses and miscellaneous 13494-80-9, Tellurium, uses and miscellaneous 14376-21-7, Vanadium phthalocyanine 43134-09-4 82930-30-1 108231-64-7 108432-53-7

RL: USES (Uses)

(light absorber, for thermochromic ***optical*** recording disks)

IT 77-09-8, Phenolphthalein 1552-42-7, Crystal violet lactone 26628-47-7, RED-DCF 104859-64-5, QZ-1012

RL: USES (Uses)

(thermochromic compositions containing, for ***optical*** recording materials)

IT 125-20-2

RL: USES (Uses)

(thermochromic substances composition containing, for ***optical*** recording medium)

L6 ANSWER 62 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1986:43127 CAPLUS <<LOGINID::20060727>>

DN 104:43127

ED Entered STN: 08 Feb 1986

TI ***Squaraine*** compositions and their incorporation into layered photoresponsive devices

IN Kazmaier, Peter M.; Baranyi, Giuseppa; Hsiao, Cheng Ho; Burt, Richard A.

PA Xerox Corp., USA

SO Eur. Pat. Appl., 37 pp.

CODEN: EPXXDW

DT Patent

LA English
 IC ICM C07C091-44
 ICS G03G005-06
 CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 Section cross-reference(s): 25

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 144195	A2	19850612	EP 1984-308091	19841121
	EP 144195	A3	19850717		
	EP 144195	B1	19900411		
	R: DE, GB				
	US 4552822	A	19851112	US 1983-558246	19831205
	CA 1229349	A1	19871117	CA 1984-468187	19841120
	JP 61010540	A2	19860118	JP 1984-251479	19841128
	JP 05002145	B4	19930111		
PRAI	US 1983-558246	A	19831205		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 144195	ICM	C07C091-44
	ICS	G03G005-06
	IPCI	C07C0091-44 [ICM,4]; G03G0005-06 [ICS,4]
	IPCR	G03G0005-06 [I,A]; G03G0005-06 [I,C*]
US 4552822	IPCI	G03G0005-04 [ICM,4]; G03G0005-14 [ICS,4]; C07C0087-50 [ICS,4]
	IPCR	G03G0005-06 [I,A]; G03G0005-06 [I,C*]
	NCL	430/058.800; 257/040.000; 257/431.000; 430/057.800; 430/073.000; 430/074.000; 430/095.000; 564/307.000
CA 1229349	IPCI	C07C0091-44 [ICM,4]; G03G0005-06 [ICS,4]
	IPCR	G03G0005-06 [I,A]; G03G0005-06 [I,C*]
JP 61010540	IPCI	C07C0091-42 [ICM,4]; G03G0005-06 [ICS,4]; H01L0031-08 [ICS,4]
	IPCR	G03G0005-06 [I,A]; G03G0005-06 [I,C*]

OS MARPAT 104:43127

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/ Structure 31 in file .gra /

AB ***Squaraines*** (I; R;R1,R2 = alkyl or aryl) are described for use in the photoconductive layers of layered photoresponsive devices for use in electrophotog. and the like. The devices are responsive to visible light and/or IR radiation needed for ***laser*** printing. Thus, a brush-grained ***Al*** support (150 .mu. thickness) was coated with a layer of 3-aminopropyltrimethoxysilane, cured, coated with a 1.4 .mu. photoconductive layer contg. 30% bis(4-dimethylamino-2-hydroxy-6-methylphenyl) ***squaraine*** in a Vitel PE-200 polyester binder, and then with a 17 .mu. charge carrier-transport layer contg. (4-butoxycarbonyl-9-fluorenyl)malononitrile, N,N'-diphenyl-N,N'-bis(3-methylphenyl)[1,1-biphenyl]-4,4'-diamine, and Makrolon. The resultant device showed sufficient discharge so as to respond to light from about 400 to about 950 nm, indicating both visible and IR phototosensitivity.

ST ***squaraine*** deriv electrophotog photoreceptor; ***laser*** printer electrophotog ***squaraine*** deriv; charge generation electrophotog ***squaraine*** deriv

IT Photography, electro-, plates
 (composite, with photocond. layer contg. ***squaraine*** deriv.)

IT Polyesters, uses and miscellaneous
 RL: USES (Uses)
 (electrophotog. composite photoreceptor with photocond. layer contg. ***squaraine*** deriv. and)

IT Polycarbonates
 RL: USES (Uses)
 (electrophotog. composite photoreceptor with ***squaraine*** deriv.-contg. photocond. layer and charge carrier-transport layer contg.)

IT 98523-15-0
 RL: USES (Uses)
 (electrophotog. composite photoreceptor with photocond. layer contg.)

IT 24938-04-3
 RL: USES (Uses)
 (electrophotog. composite photoreceptor with photocond. layer contg. ***squaraine*** deriv. and)

IT 24936-68-3, uses and miscellaneous 65181-78-4 93376-18-2
 RL: USES (Uses)
 (electrophotog. composite photoreceptor with ***squaraine*** deriv.-contg. photocond. layer and charge carrier-transport layer contg.)

IT 50926-11-9
 RL: USES (Uses)
 (electrophotog. composite photoreceptor with ***squaraine*** deriv.-contg. photocond. layer and layer of)

IT 7429-90-5, properties
 RL: PRP (Properties)
 (electrophotog. composite photoreceptor with ***squaraine*** deriv.-contg. photoconductive layer and support from)

IT 99684-89-6P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and electrophotog. applications of)

IT 99740-43-9P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (prepn. and reaction of, with squaric acid)

IT 2892-51-5
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with (dialkylamino)methylphenol)

IT 6153-39-5
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with dibutylamine)

IT 111-92-2
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with orcinol monohydrate)

IT 504-15-4 65220-00-0
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with squaric acid)

L6 ANSWER 63 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1984:219100 CAPLUS <<LOGINID::20060727>>

DN 100:219100

ED Entered STN: 23 Jun 1984

TI ***Laser*** recording materials

PA Nippon Telegraph and Telephone Public Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC B41M005-26; G03C001-72; G11B007-24; G11C013-04

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 58008695	A2	19830118	JP 1981-107896	19810710
	JP 03023353	B4	19910328		
PRAI	JP 1981-107896		19810710		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 58008695	IC	B41M005-26; G03C001-72; G11B007-24; G11C013-04
	IPCI	B41M0005-26; G03C0001-72; G11B0007-24; G11C0013-04
	IPCR	B41M0005-24 [I,A]; B41M0005-24 [I,C*]

AB ***Laser*** recording materials have a ***metal*** powder-org. compd. mixt. type recording layer which is prepd. by simultaneous deposition of an org. substance and a ***metal***. Fluorescein, phthalocyanine, Disperse Yellow 51, ***squarylium*** dyes, and poly(p-xylylene) are esp. useful as the org. substance and Te, Bi, and Ag are esp. useful as the ***metal***. The recording materials may also contain a reflector layer (under the recording layer) and a protective coating. The recording materials have good sensitivity for semiconductor ***lasers***.

ST ***laser*** recording material; ***metal*** dye mixt recording

material; tellurium ***laser*** recording material
 IT Recording materials
 (***optical*** , ***laser*** , ***metal*** powder dispersion
 in org. matrix as)
 IT 147-14-8 2321-07-5 7440-22-4, uses and miscellaneous 7440-69-9, uses
 and miscellaneous 13494-80-9, uses and miscellaneous 25722-33-2
 61931-40-6
 RL: TEM (Technical or engineered material use); USES (Uses)
 (***laser*** recording materials contg.)

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(FILE 'HOME' ENTERED AT 15:41:57 ON 27 JUL 2006)

FILE 'CAPLUS' ENTERED AT 15:42:04 ON 27 JUL 2006

L1 1127 S (SQUARINE OR SQUARINE OR SQUARILUM OR SQUARYLIUM)
 L2 4302206 S (LIGAND OR CHELAT? OR COMPLEX? OR METAL OR METALLIZED OR ALUM
 L3 232 S L1 AND L2
 L4 37 S (MIXED OR DIFFERENT OR COMPLEX(3A)SALT) AND L3
 L5 73 S (OPTICAL OR LASER OR INFORMATION) AND L3
 L6 63 S L5 NOT L4

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COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	345.78	345.99
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-75.00	-75.00

STN INTERNATIONAL LOGOFF AT 15:46:47 ON 27 JUL 2006